

Vladimir I. Georgiev



Introduction
to the History
of the
Indo-European
Languages

Introduction to the History of the Indo-European Languages

BULGARIAN ACADEMY OF SCIENCES

Vladimir I. Georgiev

Introduction
to the History
of the
Indo-European
Languages

Sofia • 1981

PUBLISHING HOUSE OF THE BULGARIAN ACADEMY OF SCIENCES

© Владимир Иванов Георгиев
1981
с/о Jusautor, Sofia

Table of Contents

Prefaces	11
Abbreviations	13
Abbreviations of Names of Ancient Authors and Documents Cited	15
List of Maps and Tables	17
Introduction: Problems in Linguistic Methodology	19
Chapter 1. The Third Period of the Development of Indo-European Comparative-Historical Linguistics	27
1.1. The First Period	27
1.2. The Second Period	28
1.3. The Third or Contemporary Period	30
1.3.1. New Data	30
1.3.2. Investigations and Theories	34
1.4. Conclusion	38
Chapter 2. The Problem of the Gutturals and the <i>centum-satəm</i> Theory	41
2.1. A Critical Survey	41
2.2. The Law of Palatalization	47
2.3. The Morphological Law of the Unification of the Bifurcated (Split) Root	52
2.4. Ungrounded Objections	54
2.4.1. Palatalization in the Clusters <i>kle, kwe</i> , etc.	55
2.4.2. Palatalization before a Vowel Which Came From IE <i>u, iu</i>	55
2.4.3. Unified Forms	56
2.4.4. The Cluster <i>ks</i>	57
2.4.5. Erroneously Reconstructed Forms	58
2.5. Special Cases	58
2.6. The Erroneousness of the <i>centum-satəm</i> Theory	60
Chapter 3. The Most Ancient Languages in the Southern Part of the Balkan Peninsula and Their Importance for Comparative-Historical Linguistics	63
3.1. The Greek Mycenaean Dialect and Its Importance for Comparative-Historical Linguistics	63
3.1.1. New Data for Comparative-Historical Linguistics	63
3.1.2. The Mycenaean Koiné	67
3.1.3. The Three Principal Greek Dialects	70
3.1.4. Mycenaean, Homeric, and Arcado-Cyprian	73
3.1.5. The Mixture of Iawonic and Aiolic	77
3.1.6. Characteristic Features of the Mycenaean Koiné	80
3.1.7. Correspondences in Other Greek Dialects	82
3.1.7.1. Hom. <i>δῶ</i>	82
3.1.7.2. Hom. <i>ἰχῶρ, ἰχῶ</i>	83
3.1.7.3. Hom. <i>κνκκ(ι)ῶ</i>	84
3.1.7.4. Hesiod. <i>ἄλκικα</i>	84

3.1.7.5.	Cypr. δ <i>χαιρὲς</i> δ	85
3.1.7.6.	The Lack of Final ν	86
3.1.8.	Conclusion	86
3.2.	The Eteocretan Language and the Greek Dialect of Phalstos . .	87
3.2.1.	Cretan Writing	88
3.2.2.	The Luwian Origin of the Eteocretan Language	90
3.2.3.	The Language of the Inscriptions of Haghia Triada	93
3.2.4.	Conclusion	95
3.3.	The Discovery of "Pelasgian": an Example of a New Application of the Comparative-Historical Method	96
3.3.1.	Historical Review	96
3.3.2.	The Indo-European Character of the pre-Greek Language	99
3.3.3.	The Denomination "Pelasgian Language"	105
Chapter 4.	The Ancient Languages in the Central and Northern Parts of the Balkan Peninsula	108
4.1.	Principles of the Etymology of Proper Names	108
4.2.	Thracian	111
4.2.1.	The Thracian Vocabulary	112
4.2.1.1.	Glosses with a Well Established or Quite Probable Etymology .	112
4.2.1.2.	Words Established through Interpretation of Proper Names . . .	113
4.2.1.3.	The Thracian Inscriptions	114
4.2.1.3.1.	The Inscription on the Gold Ring from Ezerovo	115
4.2.1.3.2.	The Inscription on the Gold Ring from Duvanlii	116
4.2.1.3.3.	The Inscription on Four Silver Vessels from Duvanlii	116
4.2.1.3.4.	The Inscription on a Vase from the Island of Samothrace	117
4.2.2.	Characteristic Features of the Thracian Language	117
4.3.	Dacian or Daco-Mysian	120
4.3.1.	The Distribution of the Dacian and Thracian Toponyms	120
4.3.2.	The Dacian Vocabulary	121
4.3.2.1.	Glosses with a Certain or Highly Probable Etymology	121
4.3.2.2.	Dacian Words Restored by Interpreting Proper Names	123
4.3.2.3.	The Dacian Inscription	124
4.3.2.4.	The Geto-Mysian (?) Inscription	124
4.3.2.5.	Mysian	125
4.3.3.	Characteristic Features of Dacian as Compared to Thracian. . . .	126
4.4.	Phrygian	129
4.4.1.	The Phrygian Vocabulary	129
4.4.1.1.	Glosses whose Interpretations are Certain or Highly Probable . .	129
4.4.1.2.	Words from the Inscriptions	130
4.4.2.	Characteristic Features of Phrygian	131
4.5.	Thracian, Dacian (Daco-Mysian), and Phrygian	132
4.6.	Daco-Mysian, Illyrian, Thracian, Albanian, and Rumanian	133
4.6.1.	The Comparative-Historical Phonology of Daco-Mysian and Alba- nian	134
4.6.2.	The Origin of the Albanians and of Their Language	140
4.7.	Phrygian and Armenian	143
Chapter 5.	The Principal Ancient Ethnic Groups on the Balkan Peninsula Established on the Basis of the Geographical Distribution of Ono- mastics	146
5.1.	The Daco-Mysian Region	148

5.2.	The Thracian Region	150
5.3.	The Pre-Greek (Pelasgian) Region	154
5.4.	The Proto-Greek Region	156
5.4.1.	Epirus	156
5.4.1.1.	Regions and Tribes (from North to South)	156
5.4.1.2.	Rivers	157
5.4.1.3.	Mountains	158
5.4.1.4.	Settlements and Localities	158
5.4.2.	Western and Northern Thessaly and Pieria	160
5.4.2.1.	Regions and Tribes	160
5.4.2.2.	Rivers	160
5.4.2.3.	Mountains	161
5.4.2.4.	Settlements and Localities	161
5.4.3.	* <i>Agros</i> , * <i>Agys</i> <i>ou</i>	162
5.4.4.	Wrong Suppositions	164
5.5.	The Macedonian Region	165
5.5.1.	The Basin of the Haliacmon River (Southern Macedonia)	166
5.5.1.1.	Regions and Tribes	166
5.5.1.2.	Rivers	166
5.5.1.3.	Mountains	166
5.5.1.4.	Settlements and Localities	166
5.5.2.	Characteristic Features of the Comparative-Historical Phonology of Macedonian	167
5.5.3.	The Mixed Character of the Macedonian Toponymy	170
5.6.	The Proto-Phrygian Region	171
5.7.	The Illyrian Region	172
5.8.	The Western Part of the Balkan Peninsula	175
5.9.	Thracian and Illyrian	175
5.10.	The Origin of the Place Names (and Appellatives) Formed by the Suffixes <i>-vθ/vθ-</i> and <i>-σ(σ)/ττ-</i>	178
5.10.1.	The Suffix <i>-vθ-</i>	179
5.10.2.	The Suffix <i>-σ(σ)/ττ-</i>	181
5.11.	Some Problems in Chronology	184
5.12.	The Ethnogenesis of the Balkan Peoples in the Light of Onomastics	186
5.12.1.	The Balkan Peninsula	186
5.12.2.	Crete	188
5.12.3.	The Aegean Region: Conclusions Based on a Comparison of Linguistic, Archaeological, and Historical Data	190
Chapter 6.	The Ancient Indo-European Languages of Asia Minor	194
6.1.	Hittite, Luwian, and Palae	194
6.2.	The Hittite-Luwian Suffixes <i>-nd/t-</i> and <i>-ss-</i>	197
6.2.1.	The Origin of the Toponyms Formed by the Suffix <i>-nd/t-</i>	198
6.2.2.	The Origin of the Toponyms Formed by the Suffix <i>-s(s)-</i>	199
6.3.	The Position of Hieroglyphic Luwian	201
6.4.	Lycian=Termilian	203
6.5.	Lydian	207
6.6.	Carian	210
6.6.1.	The Historical Phonology of Carian	210
6.6.2.	The Formation of Carian Names	211

6.6.3.	The Carian Vocabulary	212
6.7.	Other Less Known Indo-European Languages of Asia Minor	214
6.7.1.	The Inscriptions from Side in Pamphylia	214
6.7.2.	The Pisidian Inscriptions	215
6.8.	The Cypro-Minoan and "Eteo-Cyprian" Inscriptions	215
6.9.	Indo-European or non-Indo-European?	216
6.10.	Hydronymic Data on the Ethnic Situation in Western Asia Minor	217
Chapter 7.	The Problem of the Relationships between the Mediterranean Languages	221
7.1.	Introduction	221
7.2.	Basque	224
7.3.	Etruscan	229
7.3.1.	The Problem of Language	229
7.3.2.	The Morphological Model of Etruscan	232
7.3.3.	Defining the Meaning of the Morphemes	236
7.3.4.	Translation or Interpretation	237
7.3.5.	Conclusion	241
7.3.6.	Borrowings	242
7.4.	The Origin of the Etruscans	242
7.5.	The Language of the Lemnos Stele	251
7.6.	Hattic, Hurrian, and Urartean	254
7.7.	Sumerian, Elamite, and Cassite (Cosseian)	257
7.8.	Conclusion	258
Chapter 8.	Balto-Slavic, Germanic, and Indo-Iranian	263
8.1.	The Balto-Slavic Language Unity	263
8.2.	Germanic, Balto-Slavic, and Indo-Iranian	270
Chapter 9.	Tocharian and Balto-Slavic	281
9.1.	Introduction	281
9.2.	The Treatment of the IE Labiovelars in Tocharian	283
9.3.	IE Syllabic Liquids and Nasals in Tocharian	285
9.4.	The Treatment of the Velars (the So-Called Palatals) in Tocharian	290
9.5.	Common Phonological Features of Tocharian and Balto-Slavic	291
9.6.	Common Morphological and Word-Forming Features of Tocharian and Balto-Slavic	292
9.7.	The Lexical Similarity between Tocharian and Balto-Slavic	294
9.8.	Conclusion	297
Chapter 10.	The Relationships between the Language Groups within the IE Family	298
10.1.	Italic and Celtic	299
10.2.	Linguae "Minores" Italiae Antiquae	301
10.2.1.	Lepontic	301
10.2.2.	Ligurian	302
10.2.3.	Raetic or North Etruscan	302
10.2.4.	Venetic	305
10.2.5.	North and South Picenian	306
10.2.6.	Messapic	307
10.2.7.	Sicilian	309
10.2.8.	Elymian	309
10.3.	Armenian and Greek	311
10.4.	Indo-Iranian	312

10.4.1.	Proto-Indic or a Specific Ancient Indo-Iranian Language	313
10.4.2.	Sanskrit (Indo-Iranian) and Greek	316
10.5.	Conclusions	317
Chapter 11.	The Problem of the Formation of the Indo-European Language Groups and of Their Original Home	318
11.1.	The Nature of the Problem	318
11.2.	Archaeological Data	323
11.3.	Hydronymic Data	328
11.3.1.	The Origin of the Names of the Large Rivers in Central and Eastern Europe	328
11.3.2.	European Macrohydronymy and the Problem of the Original Home of the IE Languages	333
11.4.	The Erroneousness of the Hypothesis of a pre-IE Substratum on the Balkan Peninsula	337
11.4.1.	The Fallacy of a pre-IE Substratum in the Vocabulary of the Balkan Languages	337
11.4.1.1.	<i>Οἶνος, ἀμπέλως, ἔλαιον, κιννάδαριος, ὄνος</i>	337
11.4.1.2.	The Pelasgian Hydronymy	341
11.4.1.3.	The Pan-Mediterranean Thesis	342
11.4.2.	The Hydronymy of the Northeastern Region of the Balkan Peninsula	345
11.4.3.	The Origin of the Names of the Largest Rivers in the Balkan Peninsula	347
11.4.3.1.	The South	349
11.4.3.2.	The East	350
11.4.3.3.	The West	352
11.5.	Conclusion	354
I.	The Northern Indo-European Group	358
II.	The Western Indo-European Group	360
III.	The Central Indo-European Group	360
IV.	The Eastern Indo-European Group	360
V.	The Southern (Aegean) Indo-European Group	361
VI.	The Hittite-Luwian Group (or Southeastern Indo-European, Anatolian Group)	361
Bibliography		365
Index of Words		400
Index of Scholars Mentioned in the Text		420

Preface to the First Edition

This book is an expanded version of the lectures I delivered during the autumn of 1956 at the Philological Faculty of Moscow University.

The separate chapters are linked to each other by an intrinsic interrelation. My aim is to present the most recent achievements and the major problems in comparative-historical linguistics, as well as their varying reflection on the problems of the origin of and the relationships between the language groups within the Indo-European family. For this reason the book includes an exhaustive analysis of the problem of the gutturals which is closely connected with the problems of the dialectal classification of the Indo-European languages.

I am aware that some of my assumptions are hypothetical, but analysis of facts which are very complicated and often insufficient makes this inevitable. The problem is: which hypotheses have we already gone beyond and which can be considered to be the most probable, given the existing situation in Indo-European linguistics? I will consider that I have achieved my aim if I succeed in drawing the attention of the reader to these problems.

V. I. G.

Preface to the Second Edition

The interest in this book is evident from the fact that 10,000 copies of the first edition have been sold only a few months after its appearance. Several reviews of the book appeared and pointed out the positive features as well as the deficiencies. In this new edition I have taken some of the reviewers' remarks into consideration and have made many corrections and amendments in the text (for instance, two new chapters, 5 and 9, have been added).

I should like to express my deep gratitude to Professor Carlo Gallavotti, who chose to include this work in the series of books published by him, as well as to Professor Anna Sacconi, who handled the publication of this book.

I owe special thanks to Miss Wilma d'Aleo who translated this extremely difficult material, as well as to Professor Riccardo Picchio who is the editor of the Italian version.

It is a great pleasure to extend my thanks to my wife, Magdalena Georgieva, and to Mrs. Radka Mircheva, who worked painstakingly on the indexes, as well as to Mrs. Bistra Karadjova for her kind cooperation.

V. I. G.

Preface to the Third Edition

An introduction and a new chapter (Chapter 10) have been included in this new edition. Furthermore, in view of the publications which appeared after the second edition, additions have been made in many places. At the same time some details have been left out. In general, the new material and new discussions have necessitated many changes in my remarks on some subjects.

More than twenty reviews of the second edition of this book have appeared. Many of the remarks made by the reviewers have been taken into consideration. However, some reviewers did not realize why the data about some language groups were analyzed exhaustively while others were handled in a more concise form.

The main task of this book is the study of the formation and the interrelations of the Indo-European language groups and of the ethnogenesis of the Indo-Europeans, i. e., the problems of their primitive home and of the disintegration of the proto-language. The study of Hittite-Luwian has revolutionized Indo-European linguistics, and a considerable number of the theories which were formerly accepted have been unable to stand up to the new evidence. For this reason the data of the Hittite-Luwian language group are analyzed in greater detail. The same applies to analysis of Mycenaean Greek. I have also dwelled in greater detail on some less known languages which recently have been investigated, primarily on the basis of newly-found inscriptions (Thracian, Phrygian, Dacian, Venetic, Etruscan, Raetic, etc.). I have done this because these *linguae minores*, unjustly ignored until now, offer valuable data for the elucidation of our problem. A detailed analysis is also made of the interrelations between Balto-Slavic, Germanic, Tocharian, and Indo-Iranian, since there are considerable differences in the specialists' views on this matter and it was necessary to offer some sound arguments in support of my conception. In languages such as Italic, Celtic, Sanskrit, and Armenian no more ancient texts have been found: the data of these languages have been familiar to us for a long time and there is no essential change in the principal views on their relations. For this reason they are examined only briefly. Finally, ample use has been made of onomastic data and more specifically of hydronymy, since these data are of paramount importance for the problems of ethnogenesis.

I owe special thanks to Professor Jana Molhova and to Mrs. Bistra Karadjova, who translated this extremely difficult text. I am indebted to Mrs. Sylvia Lucas and to Mrs. C. G. Blomhert who very carefully prepared the manuscript for printing.

V. I. G.

Abbreviations

abl. = ablative	gen. = genitive
acc. = accusative	G. = German
act. = active	Georg. = Georgian
Aegin. = Aeginetan	Gmc. = Germanic
Aeol. = Aeolic	Goth. = Gothic
Aetol. = Aetolian	Gr. = Greek
Akkad. = Akkadian	Hebr. = Hebrew
Alb. = Albanian	HG = High German
aor. = aorist	Hier. = Hieroglyphic
Ar. = Arabic	Hitt. = Hittite
Arc. = Arcadian	Hom. = Homeric
Arc.-Cypr. = Arcado-Cyprian	Hung. = Hungarian
Arg. = Argive (of Argos)	Icel. = Icelandic
Argol. = Argolic	IE = Indo-European
Arm. = Armenian	Illyr. = Illyrian
Assyr. = Assyrian	imperat. = imperative
Att. = Attic	Ind. = Indic
Av. = Avestan	ind. = indicative
Balt. = Baltic	inf. = infinitive
Balto-Slav. = Balto-Slavic	instr. = instrumental
Boeot. = Boeotian	Ion. = Ionic
Bret. = Breton	Ir. = Irish
Bulg. = Bulgarian	Iran. = Iranian
Byzant. = Byzantine	Ital. = Italian
c. = common gender	iterat. = iterative
Car. = Carian	KN = Knossos
Cauc. = Caucasian	KUB = Keilschriften Boghazköi
caus. = causative	(Berlin, 1921 —)
Celt. = Celtic	Kurd. = Kurdish
CIE = Corpus inscriptionum Etruscarum	Lac. = Laconian
CIL = Corpus inscriptionum Latinarum	L. = Latin
Circ. = Circassian	Laus. = Lausitanian
Cret. = Cretan	Lepont. = Lepontic
Cymr. = Cymric	Lesb. = Lesbian
Cypr. = Cyprian	Lett. = Lettish
Dac. = Dacian	LG = Low German
Daco-Mys. = Daco-Mysian	Ligur. = Ligurian
Dalmat. = Dalmatian	Lith. = Lithuanian
dat. = dative	loc. = locative
dial. = dialectal	Lus. = Lusatian
Dor. = Doric	Luw. = Luwian
E. = English	l. v. = lectio varia
Egypt. = Egyptian	Lyc. = Lycian
Elym. = Elymian	Lyd. = Lydian
Ep. = epic	m. = masculine
Eteocr. = Eteocretan	M = Middle, e. g., MHG = Middle High German
Etr. = Etruscan	MA = mediae aspiratae
f. = feminine	Mac. = Macedonian
Fal. = Faliscan	med. = medium
Finn. = Finnish	Mess. = Messapic
Fr. = French	MHG = Middle High German
Gall. = Gallic	

Mil. = Milyan	Rum. = Rumanian
Mod. = Modern	Russ. = Russian
MY = Mycenae	Scand. = Scandinavian
Myc. (Gr.) = Mycenaean (Greek)	<i>scil.</i> = <i>scilicet</i>
Mys. = Myslan	schol. = scholion, scholia
n. = neuter	Schol. = Scholiast
nom. = nominative	Scyth. = Scythian
O = Old, e. g. OE = Old English, OHG = Old High German	SE = Studi Etruschi
OBG = Old Bulgarian (OCS)	Sem. = Semitic
OHG = Old High German	Serb. = Serbian
opt. = optative	sigm. = sigmatic
Osc. = Oscan	sing. = singular
Pal. = Palaic	Skt. = Sanskrit
part. = participle	Slav. = Slavic
pass. = passive	Slov. = Slovene
Pel. = Pelasgian	Span. = Spanish
perf. = perfect	subj. = subjunctive
pers. = person	suff. = suffix
Pers. = Persian	<i>s. v.</i> = <i>sub voce</i>
Phoen. = Phoenician	Swed. = Swedish
Phryg. = Phrygian	TA = tenues aspiratae
PID = J. Whatmough, <i>The Prae-Italic Dialects of Italy</i> (London, 1933)	Term. = Termilian
PIE = Proto-Indo-European	Thess. = Thessalian
pl. = plural	Thrac. = Thracian
Pol. = Polish	TLE = <i>Testimonia linguae Etruscae</i> (Pallottino 1968 b)
Prakr. = Prakrit	Toch. = Tocharian
pres. = present	Turk. = Turkish
pret. = preterite	Ukr. = Ukrainian
Pruss. = Prussian	Umbr. = Umbrian
PY = Pylos	var. = variant
Raeto-Rom. = Raeto-Romance	Ved. = Vedic
Rom. = Romance	Vest. = Vestinian
	v. l. = varia lectio
	voc. = vocative

Abbreviations of Names of Ancient Authors and Documents Cited

Acta SS. = *Acta Sanctissimorum*

Ael. = Aelianus (II/III A. D.)

Aesch. = Aeschylus (VI/V B. C.)

Aeschin. = Aeschines (IV B. C.)

Aetius (VI A. D.)

Alcman (VII B. C.)

Amm. = Ammianus Epigrammaticus (II A. D.)

Amm. Marc. = Ammianus Marcellinus (IV A. D.)

Anonymi Stadiasmus maris magni (I B. C. / I A. D.)

Anonymi Periplus Ponti Euxini

Ap. Rh. = Apollonius Rhodius (III B. C.)

Apd. = Apollodorus Mythographus (I A. D.?)

Apoll. = Apollonius Paradoxographus (II B. C.?)

Apoll. Perg. = Apollonius Pergaeus (III/II B. C.)

Ar. = Aristophanes (V/IV B. C.)

Archil. = Archilochus (VII B. C.)

Aristot. = Aristoteles (IV B. C.)

Arr. = Arrianus (II A. D.)

Athen. = Athenaeus Grammaticus (II/III A. D.)

Att. = Attalus Grammaticus (II B. C.)

Auson. = Ausonius (IV A. D.)

Call. = Callimachus (III B. C.)

Caes. = Julius Caesar (I B. C.)

Choerob. = Choeroboscus (IV/V A. D.)

Chron. Ronc. = Chronicon Roncalense

Clem. Al. = Clemens Alexandrinus (II/III A. D.)

Cod. = Codex Justinianus (IV/VI A. D.)

Const. Porph. = Constantinus Porphyrogenetes (X A. D.)

Dem. = Demosthenes (IV B. C.)

Democr. = Democritus Ephesius (V B. C.)

Dio Cass. = Dio Cassius (II/III A. D.)

Dion. Hal. = Dionysius Halicarnassensis (I B. C.)

Diosc. = Dioscorides Medicus (I A. D.)

D. Per. = Dionysius Periegeta

D. Sic. = Diodorus Siculus (I B. C.)

Erotianus = Erotianus Grammaticus (I A. D.)

Et. M. = *Etymologicum Magnum* (X A. D.)

Eudoxus in St. Byz. = Eudoxus in Stephanum Byzantium

Euph. = Euphorio Epicus (III B. C.)

Eur. = Euripides (V B. C.)

Eust. = Eustathius (XII A. D.)

Eust. Dion. Per. = *Dionysius Periegeta cum*

commentarii Eustathii

Fortunatianus (IV A. D.?)

Georgius Amartolus

Georgius Monachus

GR = *Ravennatis Anonymi Cosmographia*

Harpocr. = Harpocratio Grammaticus (I or II A. D.)

Hdt. = Herodotus (V B. C.)

Hecat. = Hecataeus Milesius (VI/V B. C.)

Hellanic = Hellanicus (V B. C.)

Hermipp. Com. = Hermippus Comicus (V B. C.)

Herodianus = Herodianus Grammaticus (II A. D.)

Hesiod. = Hesiodus (VIII/VII B. C.)

Hesych. = Hesychius (V/VI A. D.)

Hierocl. = Hierocles Synecdemus (VI A. D.?)

Hieronymus (IV/III B. C.)

Hipp. = Hipponax (VI B. C.)

Hippocr. = Hippocrates (V/IV B. C.)

Hom. = Homerus

Hrdn. = Herodianus Grammaticus (II A. D.)

IA = *Itinerarium Antonini Augusti*

IH = *Itinerarium Hierosolymitanum*

Iord. = Iordanes (VI A. D.)

Iæus (IV B. C.)

Leo Grammaticus

Livy = Titus Livius (I B. C. / I A. D.)

Lycophr. = Lycophron (III B. C.)

Lysias (V B. C.)

Marc. Ant. = Marcus Antoninus (II A. D.)

Mela = Pomponius Mela (I A. D.)

Mimn. = Mimnermus (VII/VI B. C.)

ND = *Notitiae dignitatum*

Not. ep. = *Notitiae episcopatum*

Nic. = Nicander (II B. C.)

Nonnus (IV/V A. D.?)

Origenes (III A. D.)

Orph. = Orphica

Ovid. = Ovidius Naso (I B. C. / I A. D.)

Paulus Festus (VIII A. D.)

Paus. = Pausanias Periegeta (II A. D.)

PFay = The Fayûm towns and their papyri

Phot. = Photius (IX A. D.)

Phrynichus (II A. D.)

Pind. = Pindarus (V B. C.)

Plato (V/IV B. C.)

Pliny = C. Plinius Secundus (I A. D.)

Plut. = Plutarchus (I/II A. D.)

Pollux (II A. D.)

Polyb. = Polybius (II B. C.)

Porph. = Porphyrius Tyrius (III A. D.)	Georgius Syncellus
<i>POsl.</i> = <i>Papyri Osloenses</i>	Tac. = C. Cornelius Tacitus (I / II A. D.)
Prisc. = Priscianus (V / VI A. D.)	Theocr. = Theocritus (III B. C.)
Proc. = Procopius Caesariensis (VI A. D.)	Theognis (IV B. C.)
Pseudo-Ap. = Pseudo-Apulcius	Theoph. = Theophanes Byzantius (VI A. D.)
Ptol. = Ptolemaeus (II A. D.)	Theophr. = Theophrastus (IV / III B. C.)
Scylax (IV B. C.?)	Theophyl. Sim. = Theophylactus Simocatta (VII A. D.)
Scymnus (II B. C.)	Thuc. = Thucydides (V B. C.)
Servius (IV A. D.)	<i>TP</i> = <i>Tabula Peutingeriana</i>
Sol. = Solon (VI B. C.)	Ulpianus (III A. D.)
Soph. = Sophocles (V B. C.)	Val. Flacc. = C. Valerius Flaccus (I A. D.)
St. Byz. = Stephanus Byzantius (V A. D.?)	Virgil = P. Vergilius Maro (I B. C.)
Strabo (I B. C. / I A. D.)	Xen. = Xenophon (V / VI B. C.)
Suid. = Suidas (X A. D.)	

List of Maps and Tables

Table 1: Languages in Which the Labiovelars Were Preserved	62
Table 2: Languages in Which the Labiovelars Changed into Velars.	62
Table 3: Correspondences of the Specific Features of Homeric, Mycenaean, and Arca- do-Cyprian as Compared to Iawonic and Aiwolic	76
Table 4: The Evolution of Homeric and Arcado-Cyprian in the Post-Mycenaean period	79
Table 5: Characteristic Features of the Comparative-Historical Phonology of the pre-Greek Language (Pelasgian).	103
Table 6: Characteristic Features of Thracian	114
Map 1: Daco-Mysian and Thracian Toponyms	
Table 7: Typical Features of Dacian (Daco-Mysian)	124
Table 8: Typical Features of Phrygian	132
Table 9: Typical Features of Dacian (Daco-Mysian), Thracian, and Phrygian . . .	133
Table 10: The Treatment of the IE Phonemes in Daco-Mysian and Albanian . . .	140
Map 2: The Balkan Peninsula: Principal Ethnic Regions	147
Table 11: The Historical Phonology of Macedonian	169
Table 12: Typical Features of Illyrian	174
Table 13: Related Words in Semitic and Egyptian	223
Table 14: The Morphological Model of Etruscan	233
Table 15: The Morphological Model of Hittite	234
Table 16: The Etruscan Pronominal Forms Which Have Exact Correspondences in Hittite	234
Table 17: Comparative Table of Hittite-Etruscan Phonematic Correspondences . . .	235
Map 3: The Principal IE Languages from 3500 to 2500 B. C.	357
Map 4: The IE Languages during the First Half of the Neolithic Period (VI-IV millennium B. C.): the Principal Groups	357
Map 5: PIE and Late IE	362

Introduction

Problems in Linguistic Methodology

The Neogrammarians were fortunate. In their time linguistics was virgin soil. For this reason they could choose and work on problems whose factual material was almost one-dimensional and whose solutions were obvious.

But nowadays we have completely run out of such simple problems. We are facing extremely complex problems. Their data are so obscure that the mere finding out of the facts requires complicated linguistic operations. Thus, in spite of the fact that linguistic methods today are qualitatively improved and quantitatively increased, the methods for proving theories are becoming more complicated and hence their convincing power is impaired. Often they begin to contradict the principle of the economy of the scientific proof and for this reason they do not seem very probable.

Today linguistics needs **new methods for investigation**. The discovery and introduction of new methods and ways of applying the already existent methods of linguistic analysis are, at the present time, one of the major tasks facing our field of science: for this is the way to enrich linguistics.

In linguistics, as is usually the case in science, one works predominantly in an empirical manner, i. e., the approach usually taken by the investigator towards the problems in his branch of science is empiric: by collecting and classifying facts he draws his conclusions. These conclusions are results, hypotheses or theories. However, the problems are usually too complicated and one can never be sure that all the necessary information has been collected. At the same time, facts or categories of facts are often not exhaustive, since empiricism cannot indicate which facts or categories of facts should be taken into consideration in order to draw the correct conclusions. Consequently, empiricism cannot guarantee secure results, except as far as very narrow and specific problems are concerned.

A hypothesis may be considered to be good if it explains 51 per cent of the facts. But the other facts, not included in this percentage or not explained, could contain the correction or even the refutation of the hypothesis. The optimum solution to a given problem is achieved when the conclusions cover all the categories of facts, or at least the greatest possible number of facts. It should be kept in mind that the progress of scientific knowledge is a string of theoretical hypotheses, each more exhaustive, more powerful, and more general than the preceding one.

Let us take as an example the traditional, i. e., the Neogrammarian thesis about the tripartition of the gutturals in Indo-European. The erroneous basis for this thesis is that it takes only some categories of facts, and not all possible facts, into consideration. Entire categories of homogeneous facts are never given a chance to be explained because of the concept of tripar-

tition. Thus, for instance, words with velars instead of sibilants in the so-called *satəm* languages (of the type OBG *slušati* vs. Lith. *klausyti* 'to hear'), which comprise 18 per cent of the IE roots with velars, are ignored by the traditional hypothesis. Other explanations — explanations outside the possibilities of this thesis — have to be sought for in such cases. Furthermore, the logical conclusion drawn from this thesis, namely that the velars in the so-called *centum* languages originally were not velars but palatals, is quite unlikely (see section 2.2).

The comparative-historical method and the structural method, both of which are already classical, form the solid basis for our investigation. These methods are by no means exhausted: the "laryngeal" and the "Pelasgian" theories, which are new applications of the comparative-historical method, are evidence of this. The perfecting of these methods, as well as the perfecting of the experimental methods in linguistics, the methods of induction and deduction, the method of "areal linguistics", the linguistic atlas, the application of mathematical methods — all these together put a major task before the linguists.

The greatest discovery which took place in linguistics during the second half of the 19th century was the discovery of the **phonetic laws** and their **exceptionlessness** (*die Ausnahmslosigkeit der Lautgesetze*). The application of the principle of the exceptionlessness of the phonetic laws made it possible for the Neogrammarians to make considerable achievements in the field of comparative linguistics, especially in the field of etymology. With this discovery linguistics acquired the right to be considered a real science, for a discipline merits the noble name of science when it is able to discover the laws governing the phenomena within the range of its interests.

Thus, the Neogrammarians, spontaneously and by empirical means, arrived at a basic principle of dialectical and historical materialism, namely that not only natural phenomena but also social phenomena are governed by laws.

However Schuchardt, Gilliéron, and after them the Neolinguist idealists did not hesitate to negate the phonetic laws and the etymology based on these laws.

In the long controversy on this question the Neogrammarians were not able to successfully defend the discovery they had made by empirical means. Their philosophic views on the nature of language were those of the individualistic psychology of Steinthal. From the point of view of their psychological thesis about the individual isolated creator (*'créateur isolé'*) it was not possible to give a satisfactory explanation for the exceptionlessness of phonetic laws. For this reason the adherents to the idealistic Neolinguistic school, who have waged and still are waging a cruel struggle against the phonetic laws and criticize the Neogrammarians for being materialists, have achieved some success. Their contention that these ideas were antiquated, and that the term "phonetic laws" should be substituted by the term "tendencies", found ardent supporters. Leroy writes (1972: 186) in his praise of the Neolinguistic school: "The dogma about the faultlessness of the phonetic laws and their exceptionlessness is not considered tenable anymore; now we speak of tendencies and not of laws..."¹. Similar views are found in

¹ See also Leroy 1954-55: 34 and Buyssens 1957-58: 427.

Malmberg's book (1966: 22) on new tendencies in linguistics. This view was stressed in one of the major reports delivered at the 10th International Congress of Linguists, which was presented by the well-known Italian linguist Devoto. He declared: "... the idea of the stability of the phonetic changes has not lost its validity but has changed its nature: from a naturalistic 'law' it has become a social tendency."

Such idealistic views can only provoke objections. The concept of "phonetic laws", and in general of "laws of linguistic structure", has not been replaced and cannot be replaced by the term "tendencies": these are the views of the idealistic Neolinguists and of their conscious or unconscious adherents.

Structuralism confirmed the empirical discovery made by the Neogrammarians. In his remarkable report "Why are Phonetic Laws without Exceptions", delivered to the 9th International Congress of Linguists, the French linguist Fourquet (1964: 638-639) proved, with the help of the structural method, that phonetic laws have no exceptions. The principle of the regularity of the phonetic change is a basic postulate and not an inference based on a single fact. If there were no laws, no systems could exist "where everything holds" ("où tout se tient"), there can be no structure. Structuralism presupposes the presence of laws in linguistic structure and its development.

Today, with the help of structural and mathematical principles, we are in a position to prove that **there is no basic difference between linguistic laws and laws of phenomena which are studied in the so-called (natural) sciences**, this being in contradiction to the view, which was dominant for a long time, that phonetic laws have nothing in common with physical, chemical, and in general natural laws. In reality these laws belong to one and the same category. The essence of every law, be it natural or linguistic, is one and the same. The law is the intrinsic essential connection between phenomena; it determines their necessary regular development: the law expresses fixed, causal, necessary, and stable connections between phenomena.

De Saussure defined language as "a system in which everything holds". Today this definition should be made more precise in the following way: language is a structure; linguistic structure is a complex whole in which "everything holds". The system is a subordinate category in the structure of language. Structure is one of the basic concepts in contemporary linguistics, "one of those terms which still has programmatic importance", as the eminent French linguist Emil Benveniste (1966: 8) said.

Law has two essential aspects: relation and the categorical aspect. Relation is the ties, i. e., the coherence among the systems in the structure and in the monemes (units) in different systems. Regularity is a statistical concept: it is the principle of mathematical frequency. Regularity itself, i. e., the entirety of rules, is a given relation of a categorical nature.²

Thus regularity is inherent in the nature of language because the structure of language, like every other structure—for instance the atom, the human body, or the economic structure—is a **relative stability of the interrelations of the parts of a complex whole**. And so there is no qualitative difference between phonetic and natural laws. There is only a certain quantitative difference which is a matter of mathematical frequency.

² See Heinz 1965: 51-52.

Linguistic structure can be compared to a polycrystal in physical chemistry. Every chemical element or chemical item has its own specific crystallization which is materialized as a result of the specific laws of crystallization. According to these laws, the chemical elements and substances crystallize in monocrystals or in polycrystals. But the chemical elements are usually not isolated in nature: their laws for crystallization often intersect with other laws under the complex circumstances in which the element or substance may be at the time of crystallization. Thus complex crystals appear. Linguistic structure is like the structure of the polycrystals and the laws for the formation of the polycrystals are of the same category as the laws of linguistic development. Linguistic changes would have no exceptions if there were no interfering factors.

Consequently linguistics, whose object of investigation is a social phenomenon, is a social science and is as much an exact science as any other natural or social science.

In natural phenomena and in the development of human society there are certain laws which have to be discovered by science. Through the comparative-historical method, i. e., in comparative-historical linguistics, laws are discovered which determine the development of languages. In this way the comparative-historical method has laid the foundations for a real linguistic science, thus turning linguistics into science.

The classification of science as a whole into sciences, i. e., natural or mathematical sciences, and humanities (with no laws but only coincidences) was rejected long ago. These are metaphysical and idealistic views. The greatest merit of Karl Marx was that he was able to prove that the development of human society was determined by laws: this discovery turned the so-called humanities (*sciences d'esprit*) into real sciences. Contrary to metaphysics, dialectics asserts that the function of the natural laws as well as of the social laws, as discovered by the respective sciences, is limited by certain conditions. Natural and social laws are general in the sense that they are realized everywhere and always, given that the respective adequate conditions are present.

The physical law "water boils at 100° C" holds true only under specific conditions (that the water be at sea level); on Montblanc, however, water boils at 96° C. To the question of what temperature makes water boil in space, where the cosmonauts fly, the physicists answer that this has not yet been investigated and for the time being nothing positive can be said. The case is the same with phonetic laws. Every natural and social law expresses the necessary connection among the phenomena within the framework of a (historically) determined set of connections. The conditions determining one or another phenomenon, like everything else in nature, exist in space and time. For this reason the determination of objects and phenomena acquires the form of dependence on the conditions of space and time.³

One could object to the above by saying that the function of the linguistic law (the linguistic change) does not take place suddenly but within a shorter or a longer period of time. But the same applies to the operation of the natural laws. At 100° C at sea level water will not boil immediately; it

³ My opinion on these problems is very similar to the conception of the Soviet linguist Čikobava (1959), the American linguist Hall (1963 and 1956), the Rumanian linguist Graur (1958), and others.

boils only after the amount of time necessary for the process of heating, i. e., upon reaching the crucial moment of the conditions. A process similar to this "heating" is also necessary for the operation of linguistic laws.

Therefore it is only in the light of Marxism that the nature of the phonetic laws can be clarified correctly and that the importance of the comparative-historical method in linguistics can be best evaluated. Undoubtedly phonetic laws, as well as linguistic laws in general, have their own specific nature, but from the Marxist point of view they are also laws like all other laws of social or natural phenomena. They are the laws of the movement of a specific phenomenon. And just as natural laws are realized everywhere and always, i. e., they are "exceptionless" under fixed circumstances, linguistic laws are exceptionless in the same way.

At the 10th International Congress of Linguists (Bucharest, August 1967) the Swedish linguist Bertil Malmberg, who presented one of the major reports, took a stand against *historicism in linguistics* by declaring the "factor time" to be extralinguistic. In the conclusion of his report he said (1969: 4): "In linguistics there is no... historical method in the real sense of the word but only a method establishing relations among the strata... The factor time is extralinguistic."

This is nothing but a variant of one of the principles of the anti-historical axioms of his teacher, Hjelmslev. This is one of the dogmas of the "ivory tower", as the eminent French linguist Martinet characterized Hjelmslev's thesis. Hjelmslev taught that the important thing in any science is the constant, the stable, the identical, and that time is an impediment to any rationality. He even spoke of a kind of "structural achrony", a typical example of anti-historicism which is now the banner of the idealistic philosophy and its adherents in linguistics.⁴

But where can one find an "extra-temporal" language? Is it possible for the investigation of an imaginary meta-language to give satisfactory results? All social phenomena, like everything else in nature, exist in time and space. Consequently, the interrelations of phenomena acquire a form of dependence on the conditions of space and time. The "factor time" is inseparably connected with the social phenomenon called language, as well as with its development. The permanent element in language is its constant movement, i. e., its development.

Language is a structure in motion and this is the difference between a linguistic structure and a text. Many synchronic investigations, overlooking the data of the comparative-historical method, present a more or less systematized inventory of facts. Such investigations are more suitable for programming material for machine translation: they are one-sided and limited.

Undoubtedly the synchronic or descriptive investigation of a language, i. e., the description of the relations existing among the phenomena of the linguistic structure as it is within a given period of time, and in general of the entire complex mechanism on the basis of which human language can be used as a means of communication and conveyance of messages, is scientific. But usually only diachronic investigation can explain the changes. For this reason the two methods, the comparative-historical and the structural, must be used simultaneously: they complement each other.

⁴ See section 1.3.3.

Having arrived by empirical means at the discovery of some fundamental features of the logical structure of language, the Neogrammarians were steadfast in their views of individualistic and subjective psychologism concerning many philosophical problems. One of the consequences of these views was the concept of "analogy". Analogy was in flagrant contradiction to the exceptionlessness of phonetic laws. But the Neogrammarians were not in a position to overcome the dualism they had got themselves into.

Structuralism shows that the majority of the cases which the Neogrammarians considered to be "analogy" are consequences of morphonological, morphological, morphosyntactical, syntactical, and semantic laws. The cases explained by them as being "analogy", such as Skt. *pacāmi*, *pacasi*, *pacati* = Bulg. dial. *peča*, *pečeš*, *peče*, are considered by us to be the result of the action of the law of the neutralization of allomorphs in a system (see section 2.3).

On the whole the term "exception", which is still in use, should be completely eliminated from comparative-historical linguistics. For when we speak of "exceptions", we are also dealing with erroneously formulated laws, laws which intersect, or laws from different levels of linguistic structure (phonematic, morphologic, syntactic, semantic, etc.). Synchronic normative grammar speaks of exceptions because it ignores linguistic development.

Some linguists speak of "regularities which have not been developed to the end". This refers to changes of the premises in the process of linguistic development and can be illustrated by the following example. During the winter, if a pail of water is put outside, within several hours ice needles or crystals will start forming in the water. If the pail is then brought into a warm room, the ice needles and crystals will gradually disappear. Of course this does not mean that this process contradicts the natural law that "water turns into ice when the temperature is below zero" but simply that the realization of the natural law could not take place because the premises for its operation were changed. The same applies to the so-called "laws which have not developed to the end."

Another contention of the idealistic Neolinguistic school and its satellites is that the attempts to find out the reasons for phonetic development are illusory.⁵ This idealistic view was refuted by structuralism. Through the structural method we are able to discover the reasons for the linguistic changes: these reasons are usually inherent in the linguistic structure itself.⁶

The solution of a problem depends very much on correct preliminary formulation. The formulations of the major problems of our science are closely connected with the theoretical views of the investigator: this is his basis for scientific operations. For instance, using theistic conceptions as a starting point, some linguists (Bertoni, for instance) exclude the problem of the origin of language from the field of linguistics.

There are also linguists who think that the problem of the origin of language and its prehistory should be dealt with by the psychologists or sociologists of language, but not to those interested in the history of lan-

⁵ See for instance Leroy 1972: 186.

⁶ See Georgiev 1969d.

guage, "because the period of time which is the concern of the historian-linguist covers only an insignificant part of the history of speaking man."⁷ Thus, our science is deprived of one of its most important problems.

These are the views of the Neolinguists-Idealists and the synchronists, whose ideas on this problem reflect Neogrammarian concepts. It is a fact that the history of language, as it has been developed by the Neogrammarians, could not bring us any closer to the more ancient stages of the development of language.

There is no doubt that the problem of the origin of language is complex and that its solution requires investigations in the most divergent fields of human knowledge. Nevertheless, priority should be given to the linguists. Neocomparativism can improve the comparative-historical method so that it can penetrate into far more remote periods of the development of language.

During the last three decades the comparative-historical method (at least in the field of the IE languages) has been fundamentally renewed. This is basically the result of the investigation of the Hittite-Luwian languages and the ancient languages of the Balkan Peninsula, as well as the result of the laryngeal and "Pelagian" theories and the new conceptions about the formation of IE words, etc. We are presently going through the period of **structural neocomparativism**, the period of the method of the **remote reconstruction**. The investigations of the development of the most ancient stages of IE, such as those by Benveniste, Lehmann, Georgiev, Andreev, etc. throw a completely new light on these remote periods. It has become clear that the comparative-historical method can provide valuable information on the origin and the ancient development of languages, and that linguistics has priority in the investigations of the problem of the origin and most ancient stages of development of language. The comparative-historical method, which has now been renewed, is making new achievements.

The most important principles of **structural historicism** are the following:

1. Language is a social phenomenon which represents a complex logical structure in constant movement: this is the diachronical plan of language. The structure of language represents a relative stability in the interrelations of the parts of a complex whole

2. Like every other structure, linguistic structure is based on regularities: these are the laws of the development of language. Linguistic laws belong to the same category as the laws of the so-called exact sciences: the difference is only quantitative.

3. The synchronic plan of language is its being used as a means of communication (and to express thought) according to the norms of the function of speech. Speech is a unity of habits: it is used to convey messages in society. The existing correlations within the system and the morphemes, i. e., the entirety of the results at a given stage of linguistic development, are reflected in the function of speech. This is the generative code of speech.

Thus, language is a structure consisting of numerous interdependent systems. By system we mean the unity of homogeneous interdependent ele-

⁷ Malmberg 1966: 34-35.

ments (units, monemes), i. e., the parts within the framework of the complex whole. Given the interdependence of the systems, it follows that a change which takes place in one of the systems provokes changes in other systems, as in a chain reaction. This new conception thus makes it possible to define the reasons for linguistic changes. In the past some linguists had a presentiment about this and used the expression "compulsion of the system" (Systemzwang).

It is well known that in linguistics (the same applies to other sciences), two or more contradictory hypotheses on one and the same problem very often exist. For this reason the problem of discovering a method for testing the validity of the scientific hypotheses is of special importance at the present time. Because language is a complex logical structure, **mathematical logic** can help us if we are able to adapt it to our needs.

In one of my works⁸ an attempt was made to apply the method of mathematical logic to a controversial issue in the field of Slavic studies. The issue was connected with the problem of whether a short *o* or a short *a* existed as a vowel in the Proto-Slavic phonemic system. The result of applying the principle of mathematical logic to this specific problem of linguistics is as follows:

Indo-European	Common Slavic	Slavic Languages	Result
	(A) 1 0 0	1 1 0	=3
<i>ar/lC, or/lC</i>	(A) <i>or/lC</i> > <i>ār/lC</i> <i>or/lC</i> (B) <i>ar/lC</i> > <i>ār/lC</i> <i>ar/lC</i>	<i>r/lāC, r/loC, r/lā/oC</i>	
	(B) 1 1 1	1 1 1	=6

The meaning of this Table is as follows:

The changes of IE *o* > common Slav. *a* and IE *a* > common Slav. *o* in the two theses A and B are possible (=1), but the assumed form *or/lC* of thesis A is not recorded anywhere (=0), while the form *ar/lC* of thesis B is often recorded (=1) in the period before written texts existed. The assumed Slavic cluster *or/lC* changes in the Slavic languages due to the acute (or circumflex) intonation and the metathesis in *r/lāC*, but the change *o* > *ā* remains unexplained (=0), while the lengthening *a* > *ā* is clear (=1). The doublet forms with metathesis *r/lāC* and *r/loC* remain unexplained from the point of view of thesis A (=0), while they are clear from the point of view of thesis B (=1). Thus thesis B is the optimal solution to the problem being investigated: it is two times more efficient than thesis A.

⁸ Georgiev 1964d.

Chapter 1

The Third Period of the Development of Indo-European Comparative- Historical Linguistics

The history of the comparative-historical approach to the Indo-European languages can be divided into three major periods.

1.1. The First Period

The first period extended from 1816 to 1870. It started with the establishment of the comparative-historical method for analyzing the Indo-European languages, which was achieved by Bopp in his work "On the Conjugational System of Sanskrit Compared to Greek, Latin, Persian, and Germanic Conjugations" (1816), by Rask in his "Investigations on the Origin of Old Norse or Icelandic" (1818), and by Grimm in his "German Grammar" (1819). The end of the first period was marked by two works which summarized the achievements of IE linguistics at that time: Schleicher's "Compendium of the Comparative Grammar of the Indo-Germanic languages" (1861-62) and Fick's "A Comparative Dictionary of the Indo-Germanic Languages" (1868).¹

Needless to say, linguistics as a scholarly investigation of linguistic problems existed long before the 19th century. Linguistic facts were collected and classified, grammars of different languages were worked out, grammatical problems were discussed and these achievements altogether had already established a scholarly approach to the problems of language. Furthermore, even before Bopp some scholars, such as Scaliger (15th/16th century), Ten Kate (first half of the 18th century), Jones (second half of the 18th century), etc., had to a certain degree noticed the similarities between some languages. Indeed, the works by Bopp, Rask, and Grimm hardly could have appeared, had it not been for the work their predecessors had done on the grammatical problems of some languages. However, there is a basic difference between the methods for analysis of linguistic facts which were applied by the founders of comparative-historical linguistics and the methods used by their predecessors.

For this reason it is only pertinent to consider that linguistics became a science when the comparative-historical method of linguistic analysis was

¹ Later four editions of this dictionary appeared.

introduced, which thus made it possible for languages to be studied in their development.

Up to the beginning of the 19th century and even later, in descriptive grammars it was taken for granted that one should speak of rules, exceptions, and exceptions to exceptions. At that time it was not possible to speak of the laws of language development.

During the first period of comparative-historical linguistics, after Grimm had for the first time worked out the basic principles of the consonant shift (*Lautverschiebung*) in the Germanic languages, some rules of development were mapped out. Towards the end of this period Schleicher attempted not only to discover some of the laws of development in the phonematic structure of languages, but also even tried to define the historical rules of language development in general. This was the period of the initial accumulation and systematization of facts; these facts were not sufficiently studied and it was not possible to draw final conclusions based only on the available data. Old ideas were still predominant, and as a result Curtius spoke of "correct" and "sporadic" phonetic changes, i. e., of rules and exceptions to the rules. According to him, the parallelism of IE *k* — Gr. *κ* was "correct", while that of IE *k* — Gr. *π* was "sporadic", since the differences in the IE gutturals (velars and labiovelars) were not yet known.

Schleicher, Curtius, and their contemporaries considered the Greek vowels *a*, *e*, *o* to be the result of splits (*Spaltungen*) of the IE vowel *a* because, under the strong influence of Sanskrit,² it was thought that *a*, *e*, *o* "had torn away" from the initial phoneme *a*. For this reason the rules of vowel development could not be worked out during this period. The basic obstacle here was the theory of the absolute priority of Sanskrit, a theory which was prevalent throughout the entire first period.

1.2. The Second Period

The second period encompasses the last three decades of the 19th century and the first two decades of the 20th century, i. e., approximately from 1870 to 1916. This period was characterized by the discovery of the laws for the development of the phonetic structure of words; Verner's law (1877), the law of palatalization (1876-77 to 1881: it was discovered almost simultaneously by Verner, Tegnér, Thomsen, J. Schmidt, Collitz, and de Saussure)³, the law of Fortunatov (1882), the discovery of the syllabic liquids (Osthoff) and nasals (Brugmann), the discovery of the consonant and vowel systems, the discovery of the principle of the ablaut (de Saussure), etc. Many scholars of this period contributed to the discovery of the laws of language development. The works of such Neogrammarians as Brugmann, Osthoff, Leskien, Paul, etc. earmarked the period. It was no accident that the Neogrammarians supported the principle of the *Ausnahmslosigkeit* ("exceptionlessness") of the phonetic laws: this was an inevitable and positive reaction against the views which existed till that time.

² See Curtius 1858-62. See also Schrijnen 1921: 30.

³ See Szemerényi 1967: 69.

During the second period major efforts were made in working out a historical grammar of the IE languages. This period closes with the second edition of Brugmann's monumental work "Outlines of Comparative Grammar of the Indo-European Languages" (1897-1916) which unlike Schleicher's 'Compendium' (1861-62) has to this day maintained its significance to a great extent.

The nature and development of society are determined by laws which have to be investigated by science. Comparative-historical linguistics reveals laws which determine the development of language. For this reason it is believed that comparative-historical linguistics has laid the foundations of the true science of language and turned linguistics into a science.

The problem of the phonetic laws and of the laws of language in general has been discussed many times. Many scholars try to establish a hard-and-fast boundary between phonetic and natural laws: they think that phonetic laws are basically different from natural laws since they are restricted in time and space. For instance Schrijnen (1921:82) wrote: "They (i. e., the phonetic laws) and the laws of physics and chemistry have nothing in common; they are not 'laws' in the ordinary sense of the word but are more like phonetic rules based on specific tendencies or historical processes (*Vorgänge*)."

Hirt and Arntz (1939:17) declared: "One cannot speak of phonetic laws in the sense of natural laws." Mladenov (1943:112) pointed out: "Phonetic laws can by no means be compared to the laws of physics or chemistry... or juridical laws... Natural laws show what will happen or is happening in nature under determined conditions everywhere and always, irrespective of space and time."

These are typical metaphysical views on the concept of "scientific laws". Obviously they are rooted in the classification of sciences (i. e., the natural and mathematical sciences) and the humanities, the latter dealing with phenomena which do not follow any laws but only accidental circumstances. Natural and social laws are general in the sense that they function everywhere if the necessary conditions exist. Every natural or social law reflects the necessary link between phenomena within the framework of a complex of conditions which are historically determined. As with everything in nature, the conditions which determine a certain phenomenon exist in space and time. Consequently, the objects and phenomena are determined by space and time.⁴

The Neogrammarian school, despite some erroneous views, undoubtedly represents one of the most important trends in linguistics. Its main contribution is the establishment of the existence of rigorous regularities in the development of the phonematic structure of language and the discovery of some concrete language laws. It is no accident that the representatives of idealism in linguistics launched a fierce attack against the Neogrammarians, accusing them of being "the materialists in linguistics".⁵

⁴ See p. 20—21.

⁵ See Bartoli 1925: 63; Bertoni 1928: 31; Bonfante 1947: 344-346, 356.

1.3. The Third or Contemporary Period

1.3.1. New data

During the first period the principal relationships within the IE language family were established and the foundations for comparative-historical investigations were laid. During the second period the method of comparative-historical investigation was improved and the data on the IE languages which were known at that time were systematized: on this basis a comparative-historical grammar of common IE was compiled. The third period is marked by the discovery and analysis of the most ancient IE languages, which until this time were unknown, and thus the scope of investigation was deepened and widened. Our present task is the analysis of the new and especially the most recent achievements in the field of IE linguistics during this period.

The decipherment of Hittite (1915-17) by B. Hrozný opened a new era in the comparative study of the IE languages, and thus the early 'thirties should be considered to be the true beginning of this period, for at that time a series of papers on Hittite by Hrozný himself appeared, as well as others by Sommer, Forrer, Goetze, J. Friedrich, Ehelolf, Pedersen, Kurylowicz, Delaporte, etc. All these publications, and especially Sturtevant's "A Comparative Grammar of the Hittite Language" (1st edition, 1933), made it possible to use the data on the Hittite language in discussing problems in IE linguistics. Many other works, as for instance Pedersen's "Hittite and the Other Indo-European Languages" (1938) and "Lycian and Hittite" (1945), both of which try to solve the problem of the position of Hittite among the other IE languages, J. Friedrich's "A Concise Grammar of the Hittite Language" (1960, 1st edition 1940) and "Hittite Dictionary" (1952-66), Sommer's "The Hittites and the Hittite Language" (1947), the second edition of Sturtevant and Hahn's "A Comparative Grammar of the Hittite Language" (1951), Kronasser's "A Comparative Phonology and Morphology of the Hittite Language" (1956) and "Etymology of the Hittite Language" (1962-66), Laroche's "A Dictionary of the Luwian Language" (1959) and "The Names of the Hittites" (1966), as well as Kammenhuber's "Hittite, Palaic, Luwian, and Hieroglyphic Hittite" (1969), present good possibilities for the further usage of Hittite in the studies of the problems in IE linguistics.

The data from Hittite highlighted many problems and gave rise to new ideas. One of these problems is the **laryngeal theory**. Some hints at this problem are found in the hypotheses of de Saussure, Möller, Cuny, and Pedersen. However, it was the Polish scholar Kurylowicz who worked it out as a theory.⁶ Many linguists refuted this theory in the beginning but it gradually gained more and more supporters. At the present time, after further investigations made by Kurylowicz himself and by many other linguists, including Sturtevant, Benveniste, Couvreur, Pedersen, Hendriksen, Kuiper, Sapir, Austin, Lehmann, Kerns, Schwarz, Hammerich, Maurer, Crossland, Zgusta, Polomé, Martinet, Hoenigswald, Puhvel, etc., the laryngeal theory cannot be looked upon with scepticism, and certainly not as far as

⁶ First works: Kurylowicz 1927: 95-96; 1935.

its basic features go. Recently many critical reviews have appeared on the problems of the laryngeal theory; altogether they give more or less complete information about its history.⁷ The data on the laryngeals obtained from Hittite and from the languages of Asia Minor which are related to it were substantiated by data from other IE languages. Some points in this theory have not yet been completely clarified and the phonematic value of the laryngeals is still an open question. Nevertheless the existence of the laryngeals is a fact.

The laryngeal theory introduced entirely new elements into the study of the IE phonematic system, especially concerning ablaut, morphology, and word structure. Apart from the fact that certain aspects are not yet fully elucidated, there is no doubt that this theory marks a new stage in IE linguistics as compared to the concepts which existed before. The discovery of the laryngeals made it possible not only to reconstruct the phonematic system of PIE but also to penetrate more deeply into its development. While the formulae worked out by the Neogrammarians embraced a period of five to six thousand years (close reconstruction), contemporary formulae embrace a period of ten to twenty millennia (remote reconstruction). This means a considerably deeper plunge into the secrets of the development of language throughout tens of thousands of years and a considerable widening of our knowledge, which can be illustrated by the following example. The verbal forms of OBG *jamī*, *damī* were derived from IE **ēd-mī*, **dōd-mī* and were compared with L. *edō*, Skt. *ādmi* 'I eat', perfect *ādīmā* = L. *ēdimus*, etc., and that was all we knew about these words. Why is there lengthening (*ē*)? What is **dōd-* as compared to **ēd-*? These questions remained unsolved. The formulae of the Neogrammarians reflected a comparatively short period of the development of these words and did not make it possible to penetrate into their origin. Our new formulae extend over a very long period of time. They are richer in content and contain more elements of the act of cognition. Both ancient verbs can be reconstructed according to the following formulae:

PIE **'e-'d-mī* > Late IE **ēd-mī*.

PIE **dēx-dx-mī* > Late IE **dōd-mī*.

Compare Hom. perf. part. *ἔδ-ηδόν* from PIE **'ed-'ed-* with secondary lengthening. Symbols: *'*(=*H*₁ or *ə*₁), *h*(=*H*₂ or *ə*₂), *x*(=*H*₃ or *ə*₃).

Compare Skt. *dādāmi* from IE **de-dex-mī*, Gr. *δίδωμι* 'I give', L. **(re)ddō*, Vest. *didet* 'he gives'; *ex* > *ō*.

These formulae, which are not only condensed forms of our knowledge but also corrections of our scholarly suppositions, show that the formation of both verbs is one and the same; these verbs have reduplication and reduplication is an ordinary means of grammatical expression. Similar formations are met in many languages and throughout different stages of their development: they mark a continuous action at the present moment (for instance, the Greek verbs *ἀεαρίζω*, *γοργαίω*, *παμφαίνω*) or the result of an action (for instance, Gr. *βέβληκα*, *μέμνηρα*, *τέτακα*, L. *cecidī*, *memini*, *tetigi*).

⁷ Zgusta 1951: 428-439; Crossland 1951: 88-97; Polomé 1952: 444-458; Abaev, Gornung, Guchman, and Kuznecov 1956: 155-163; Adrados 1961; Winter, ed., 1964; Polomé 1963; Georgiev 1969a; Lindeman 1970.

The new trends in IE linguistics which are based on the laryngeal theory can be summarized in four points as follows:

(1) A solution for many problems in the comparative-historical phonology of the Hittite-Luwian group of languages, for instance, Hitt. *ees-zi* from **es-ti* but *as-anzi* from **s-on-ti*.

(2) New possibilities for the comparative-historical phonology of the IE languages, especially in connection with the ablaut, for instance: Av. nom. *pantā* from PIE **pónteh-s*, gen. *papo* from PIE **pŋth-é/os*; Skt. *tīṣṭhati* from *(s)*tī-sth-eti* but L. *stā-re* from **steh-*; Hitt. *huhhas*, Lyc. *xuga-*, Arm. *hav*, L. *avus* from PIE **hewh(o-s)* (or **ə₃ew-*, according to Kuryłowicz); the words Skt. *dānu* n. 'fluid, drop, dew', Av. *danuš* f. 'river, stream', Ossetian *don* 'water, river' seem isolated from the Neogrammarian point of view but actually they are derived from PIE **déh-(e)n-u-* (*eh > ā*) and correspond to Skt. *dhānvati* 'flows' from PIE **d(e)h-én-u*, *dhanayati* 'puts into movement, runs, (flows)' from PIE **d(e)h-en-éy-*, Toch. *tsän* 'I flow'; Gr. *ῥέων* from PIE *(é)*g^wl'-om* but *ῥέβληται* from **g^wle-*, etc.

(3) Deeper penetration into the morphological structure of the IE languages.⁸

(4) Penetration into the structure of IE words.

These new explanations and possibilities for explanations demonstrate the considerable achievements of comparative-historical linguistics in its most recent period.⁹ Today the phonemic structure of a considerable number of IE roots must be represented in a way which is quite different from the way they were represented in scholarly works from the first quarter of this century.

Data from Hittite were amply used by Benveniste (1935) in his important though controversial theory on the origin of IE word formation.

Data from Hittite and Tocharian brought about the revision of the theory of the classification of Indo-European languages into *centum* and *satem* groups, a theory which had prevailed for quite a long time (see section 2.6).

Another achievement of IE linguistics during the most recent stage was the decipherment of the so-called "Hittite Hieroglyphic" texts. Decipherment started with the works by Meriggi, Gelb, Hrozný, Forrer, and Bossert. The bilingual inscriptions from Karatepe (southeast Turkey), which were discovered in 1947, were a great aid in achieving complete decipherment: on the one hand, they confirmed previous interpretations to a great extent and, on the other, they made further work on the texts possible.

Yet another achievement in IE linguistics during its recent stage was Bossert and Otten's discovery in 1944 of the IE character of the Palaic language.¹⁰ Palaic was spoken by a people in Asia Minor during the 2nd millennium B. C.

⁸ See, for instance, Georgiev 1969a; 1975; 1978; 1979.

⁹ Marking the laryngeals is necessary in analysing the more ancient stages of the development of the IE language, i. e., of PIE (remote reconstruction). The Neogrammarian reconstructions can be used for the stage of IE which immediately preceded the formation of the different language groups, i. e., the final stage of its development, late IE (close reconstruction).

¹⁰ See section 6.1.

"Most of the old languages of Asia Minor, as Lydian, Carian, Lycian, are not IE, but belong to a group . . . which it is convenient to call Anatolian", wrote Buck in 1933 in his *Comparative Grammar of Greek and Latin* (p. 14). It is now known that Lycian, Lydian, and probably also Carian are of Hittite-Luwian origin, i. e., IE. The discovery of the IE character of Lycian and Lydian — two languages which were spoken in western Asia Minor during the 1st millennium B. C. — is an important achievement. The IE character of these two languages was demonstrated by Bugge, Torp, and Pedersen between 1897 and 1902. But the highly respected opinion of Kretschmer, whose theory of the non-IE character of the pre-Greek population and of the population of Asia Minor prevailed at that time, was an obstacle in acknowledging the results of the Scandinavian linguists' investigations. It was not until 1936, when Kretschmer's theory was somewhat questioned, that Meriggi was able to prove the IE character of Lydian and Lycian, thus supplementing the results obtained by the Scandinavian scholars.¹¹

Use of the data on so-called Tocharian also goes back to this period: in spite of the fact that the IE character of Tocharian had already been ascertained in 1907-08, work in Tocharian on a wider scale became possible only after the publication of the *Tocharische Grammatik* by Sieg, Siegling, and Schulze (1931). Problems connected with the two Tocharian languages and their position among the other IE language groups were further investigated by Poucha, Petersen, Schwentner, Benveniste, Van Windekens, Couvreur, Pedersen, Schneider, Krause, Thomas, etc. The Tocharian grammar by Krause and Thomas (1960) and "Tocharian Confronted with the Other IE Languages" by Van Windekens (1976) are of special importance.

In describing the development of IE linguistics during the last three decades, mention should be made of the discovery, which was made on the basis of special analysis of Greek vocabulary and onomastics, of an unknown IE language called 'Pelasgian' or Pre-Greek. This discovery provided opportunities for a new application of the comparative-historical method (see section 3.3).

The decipherment of the Mycenaean tablets (Linear B), which date from the 14th-12th centuries B. C., was done by Ventris in collaboration with Chadwick (1952-53); it is an important achievement. Contrary to the dominant opinion that the language of these inscriptions was non-IE, it turned out that they were written in a specific archaic Greek dialect. This brilliant discovery caused a fundamental change of opinion and cast new light not only on the problem of the origin of the Greeks but also on the problem of the origin of the IE tribes as a whole (see section 3.1.1).

The Mycenaean dialect is of exceptional importance for IE linguistics. First and foremost, the new data confirmed some of the hypotheses which had been made on the basis of the comparative-historical method, i. e., it confirmed the precision of the conclusions drawn on the basis of this method: it once again proved the great importance of the comparative-historical method for linguistics.

During the most recent period material on several less known IE languages was collected and investigated. The position of Venetic was clari-

¹¹ See sections 6.4-5.

fied: previously Venetic was usually considered to be an Illyrian dialect but Beeler (1949, 1956) and Krahe (1950) proved that Venetic was a specific IE language closely related to Latin.¹² Illyrian and Thracian were also investigated in detail; it is now clear that the so-called Thracian language material actually belongs to three different IE languages: Thracian, Dacian, and Phrygian.¹³ During the last thirty years a great number of new Venetic texts¹⁴ and several short Thracian, Dacian, and Phrygian inscriptions have been discovered.¹⁵

The latest research in the field of the Indic dialects confirmed Sköld and Morgenstierne's supposition that the languages of the Kafiri group, which are now completely Indic, represent a third independent Aryan language branch with its own phonematic development.¹⁶ The increase in Middle and New Iranian linguistic material since the early 1930's has been spectacular and it has affected our understanding of Old Iranian, and through it, of Indo-European.

In general, after the decipherment of Hittite and the pertinent research which was done in the 1930's, IE linguistics entered its third period of development. Over the last fifty years our material has increased considerably in quantity as well as in age: we have more texts and they are much older. We now know about many more IE languages than ever before.

1.3.2. Investigations and Theories

The preceding was a brief description of the new data on the IE languages. During the third period numerous investigations dealing with various problems in IE comparative linguistics were published. Meillet's most important works appeared during the first part of this period. His "Review of a History of the Greek Language" (1930, 1st ed. 1913) and "Outlines of a History of Latin" (1931, 1st ed. 1921) are still the best histories of IE languages. Some of Meillet's other works are also important, for instance "Historical Linguistics and General Linguistics" (1948, 1st ed. 1921) and "The Comparative Method in Historical Linguistics" (1925a), etc. Meillet was undoubtedly the most eminent and prolific scholar in the field of IE linguistics during the first half of this period. However, there are some erroneous contentions in his publications. I cannot agree with him when he speaks (1948: 165) of the "aristocratic nature" of the IE "nation" or when he divides the IE vocabulary into "aristocratic" and "plebeian" words; he classified words with geminates, with *a*-vocalism under "plebeian", while words with *e/o*-vocalism are classified under "aristocratic"; thus for instance the word **owī-s* 'sheep', as opposed to **ayg-s* 'goat', belonged in the 'aristocratic' vocabulary, and the conclusion is drawn that sheep belonged to the aristocracy while goats belonged to the ordinary people. I also cannot accept his contention about the non-IE origin of

¹² See section 10.2.4.

¹³ See section 4.5.

¹⁴ See section 10.2.4.

¹⁵ See section 4.2.1.3, 4.3.2.3, and 4.4.

¹⁶ See section 10.4.

words such as *οἶνος* 'wine', *ἐλαιον* 'oil', etc. Due to the great respect Meillet commanded, these erroneous contentions became quite widely spread. At the present time they are supported by Devoto in his "A History of the Language of Rome" (1969b) and "Indo-European Origins" (1962).

Hirt's "Indo-Germanic Grammar" (1921-37) was the fifth comparative-historical grammar after the grammars by Bopp, Schleicher, Brugmann, and Meillet.¹⁷ Hirt has given satisfactory explanations for many problems. Glot-tonic problems, more specifically the problems of the origin of the verbal and nominal endings, are typical of his work, but the solutions he proposes are often of a subjective nature so that this work "can serve as an example of disregard for the classical traditions of comparative-historical linguistics."¹⁸

The theory of "spatial" (areal) linguistics presented by Bartoli (1945) and others appeared at the beginning of this period but did not lead to tangible results in IE comparative linguistics.¹⁹

Mention should be made of three of Pisani's works: "Studies on the Prehistory of the Indo-European Languages" (1933), "Geolinguistics and Indo-European" (1940), and "General and Indo-European Linguistics" (1947); many problems concerning the relationships within the IE language family and the reconstruction of common IE are tackled. These works contain many valuable considerations but at the same time few convincing hypotheses, especially in the last two books. The views which appeared under the influence of neo-linguistics led Pisani in his article "The Problem of Indo-Hittite and the Concept of Family Relationships in Language" (1949a: 251-264) to deviations from the basic principles of the comparative-historical method.²⁰ Specht made an attempt at clarifying the origin of IE declension in his book "Origin of the Indo-Germanic Declension" (1947). Despite the fact that many of his arguments are not very convincing, this book offers many new etymological explanations, some of which can be considered to be correct, but the basic theory on the origin of the IE declension remains on the whole unproved.

The first complete attempt to clarify the PIE comparative-historical phonology on the basis of the laryngeal theory and structural methods was made in Lehmann's "The Proto-Indo-European Phonology" (1955).

Three works by Kuryłowicz "Accentuation in the Indo-European Languages" (1952), "Ablaut in Indo-European" (1956), and "The Inflectional Categories of Indo-European" (1964) are valuable contributions to IE linguistics, however they would have been considerably more successful if Kuryłowicz had avoided a certain overenthusiasm for panchronistic schemes and if he had been more critical towards some of his own conceptions.²¹

The relationships within the IE family are examined in Porzig's work "The Division of the Indogermanic Language Region" (1954a). Unfortunately, Porzig did not take the latest data on the Southern IE languages into consideration.²² The content of Krahe's "Language and Antiquity" (1954) is similar, but the importance of Illyrian is overestimated.

¹⁷ Books such as Pisani (1949b) and Mladenov (1936) are text-books for students.

¹⁸ Desnickaja 1955: 271.

¹⁹ See Lejeune 1952: 149-151; Palmer 1954: 23-34; Devoto 1962: 185-187.

²⁰ See Desnickaja 1955: 271-273.

²¹ See Ivanov 1954a: 125-136. See also section 2.4.

²² See Ivanov 1965a: 111-121.

The collective work by Abaev, Gornung, Guchman, and Kuznecov (1956) is an attempt at formulating a methodology for the comparative history of the IE languages in the contemporary stage of the development of linguistics.

The collection called *Ancient Indo-European Dialects* (edited by Birnbaum and Puhvel, 1966) is an attempt at characterizing the IE languages within the bounds of the contemporary situation in IE linguistics.

In recent years a new "Indo-European Grammar", written by several authors, has begun to appear. Its aim is "to substitute antiquated books on comparative grammar with an exposition compatible with contemporary linguistics."²³

During the second half of the 1920's the foundations were laid for a new trend in the study of the phonematic aspect of language: this trend was based on de Saussure's theory as it is outlined in the "Course of General Linguistics" (1916). This trend, called "phonology" or "the phonological school" (or "functionalism"), was created by Trubetzkoy, Jakobson, Karcevsky, Mathesius, and others; it is closely connected to the activities of the Prague Linguistic Circle. It gained many adherents very quickly. In spite of the fact that "functionalism" deals primarily with general linguistics and has no direct relation to our principal problem, its importance for IE comparative-historical linguistics should nonetheless be mentioned.

Whatever our view may be on the relations between "phonetics" and "phonology", in the sense of "functionalism", on the definition of the phoneme and on the anti-historical concepts of certain "phonologists", it cannot be denied that "phonology" threw a new light on many of the problems connected with the phonematic aspect of language. Later the "phonologists" widened the field of their interests and included grammar and the entire structure of language in general. Thereafter "phonology" grew into structuralism, which we shall discuss later.

Many linguists continued to be interested in the problem of the IE gutturals, which will be discussed in section 2.2.

A difficult problem in IE phonology are correspondences such as Gr. *ἄρκτος*, L. *ursus*, Ml. *art*, Skt. *ṛkṣah* 'bear' or Gr. *τέκτων*, Skt. *takṣan-* 'carpenter', for which Brugmann suggested as "*Notbehelfe*" the signs *kḥ*, *gdh*. These specific phonematic correspondences are the result of metathesis (and assimilation) in consonant clusters due to the disappearance of the root vowel as the result of ablaut (Merlingen 1957: 49-61). Thus the original form of *ἄρκτος* was not **rkḥo-s* (or **rkso-s*) but PIE **h₁r₁tkó-s*, cf. Hitt. *hartagga-s* 'an animal of prey, bear (?)', a nomen agentis formed from the verb **h₁re₁tketi* (cf. Skt. *rakṣas-* n. 'damage, injury; the name of mighty demons' = Av. *rašah-* 'damage, harm', Av. *rašayeiti* 'he damages'); Gr. *ἄρκτος* comes with metathesis from IE **h₁r₁tko-s*, cf. Gr. *τίκτω* 'to give birth' from **u₁-tko*, aor. *τεκ-σιν*; the oldest form is the archaic *ἄρκτος* (and **A₁rk-āds*) through assimilation and simplification from **ἄρκτος* < PIE **h₁r₁tko-s*; L. *ursus* from **urssos* < Pre-Ital. **r₁ttos* (*tt* > L. *ss*) < PIE **h₁r₁tko-s*; Gr. *τέκτων* 'carpenter' through metathesis from IE **te₁-tk-ōn*; Skt. *takṣati* 'carpenters' from IE **te₁-tk-eti*; **tet₁keti* > **tet₁seti* with palatalization and assibilation (section 2.4.5) in which *tš* had turned (by assimilation) into *kṣ*.²¹

²³ At the present time the following parts have been published: Kuryłowicz (1968) and Watkins (1969).

²¹ See also Schindler 1967; 1968: 244. For *χθών*, etc. see Kretschmer 1951. The explanation of Kuryłowicz (1968) is not convincing. Kuiper (in Mayrhofer 1953-73 s. v. *takṣā*): contamination of **te₁ṣ₁ton* = *takṣan-* and **te₁ṣ₁ton* = *takṣan-*.

During this period many works were devoted to the problems in etymology. Many etymological dictionaries were, or are, in the process of being published, among them Pokorny's "Indo-Germanic Etymological Dictionary" (1951-69). The need for an etymological dictionary of the IE languages, i.e., the need for systematization of the etymological research at the present stage of the development of IE linguistics, is especially great. However, Pokorny's dictionary cannot meet this need: he does not make sufficient use of the investigations carried out during the last forty years; actually this dictionary is an amended second edition of Walde and Pokorny's "Comparative Dictionary of the Indo-Germanic Languages" (1927-32) in which, due to Walde's untimely death, publications after 1924 were not taken into consideration. This dictionary reflects the Neogrammarian period. It is now clear that it is not possible for one person to produce a dictionary of this kind, for one man is not able to become acquainted with the ever increasing number of publications on the etymological problems in the different IE languages. The compilation of such a dictionary must be the result of the combined efforts of group of specialists so that all the new material can be taken into consideration, and thus subjective interpretation of facts and assumptions will be avoided. An obvious example of the drawbacks of a dictionary by a single specialist is Frisk's "Greek Etymological Dictionary" (1954-70), in which the choice of the etymologies shows often Frisk's subjectivism. The same drawbacks are also obvious in Chantraine's "Etymological Dictionary of the Greek Language" (1968-80).

It is worth mentioning that Buck's "A Dictionary of Selected Synonyms in the Principal Indo-European Languages" (1949) is a novelty in this field.

The third period is characterized by intensive research in the field of onomastics and especially toponymy and hydronymy, which are of great importance for solving the problems of ethnogenesis.

The contemporary state of IE linguistics was recently discussed in several publications.²⁵ In his article "On the Present State of Indo-European Linguistics" (1949) Lane briefly discussed the major problems in view of the new data. Pisani (1953) has made a more detailed analysis but very often he refers to subjective views. Desnickaya has made a detailed critical analysis of the three periods from a Marxist point of view in her book "Questions on the Study of the Relationship between the IE Languages" (1955)²⁶.

A weak point in the contemporary state of IE linguistics is the scarcity of efforts in investigating the problems of the comparative-historical syntax and semantics of the IE languages. The basic problems of the history of the IE languages and of their subdivision into periods were insufficiently—or rather never—investigated. It is high time that due consideration be given to a general history of the IE languages. On the whole a serious deficiency of the third period is the fact that there were almost no works on the fundamental problems.

²⁵ The book by Hirt and Arntz, *Die Hauptprobleme der indogermanischen Sprachwissenschaft* (1939), which was published after the death of Hirt (in 1936), is a short synopsis (and preface) of Hirt's book *Indogermanische Grammatik*. Hirt did not take the most recent data in the field of IE linguistics into consideration.

²⁶ See also Georgiev (1964c and 1975b); Strunk (1965); Szemerényi (1967).

1.4. Conclusion

The main difference between the third and the second periods is the fact that during the second period conclusions concerning comparative-historical grammar and hypotheses on the ethnogenesis and history of the IE language groups were predominantly based on Sanskrit, Greek, and partly Latin,²⁷ whose written records are dated no earlier than the first half of the first millennium B. C. The discovery of new IE languages and dialects in texts which dated from the second millennium B. C. considerably widened the basis for hypotheses about the phonetico-grammatical structure of IE, which in turn brought about the revision of many of the theories which had been considered to be reliable during the second period. On the whole, through investigations of Hittite and Tocharian morphology and of other new linguistic data, it was proved that many Greek and Sanskrit peculiarities, which previously were considered to be IE specific features *ab antiquo*, were in fact secondary formations and were typical of these languages.²⁸ The entire conjugational and declensional systems need to be revised in view of the new facts.²⁹ Thus, for instance, on the basis of Skt. *-te* and Gr. *-tau* it was formerly assumed that the ending for the third person singular present indicative medio-passive of common IE was *-tay*. However, the corresponding ending in the Mycenaean dialect is *-toy*. This shows that in classical Greek *-tau* is a secondary form. Similarly, the Hittite ending for the third person singular indicative medio-passive *-ta* (and *-tari*) shows that the initial ending was *-to*, and that it acquired additional elements in some IE languages under the influence of other personal endings, for instance *-ri* (Hitt. *-tari*, L. *-tur* from *-to-ri*). Many more examples of this kind can be adduced.

The new data and investigations highlighted the problem of the relationships between the IE language branches, the problem of their origin and of their homeland.³⁰ The theory of the disintegration of common IE at the beginning of the second millennium, which prevailed for a long time, can be considered to be a part of the past in the history of our science. Our knowledge of Hittite, Greek, and Indo-Iranian (Proto-Indic) overlaps the middle of the second millennium. Even at that time these languages were quite different from each other, much more so than the Romance languages are now. The history of languages which belong to one family, such as the Slavic or the Romance languages, shows that in order to reach their present stage of differentiation, a development period of 15 to 20 centuries was necessary. Furthermore, it turned out that during the middle of the second millennium B. C. Indic was already differentiated from Iranian. All these data bring us to the conclusion that the disintegration of IE took place long before the 3rd millennium B.C.

²⁷ See also Georgiev 1941: 155; Lane 1949: 133; Pisani 1953: 128; Abaev, Gornung, Guchman, and Kuznecov 1956: 60.

²⁸ See also Abaev, Gornung, Guchman, and Kuznecov 1956; Georgiev 1975 a and b.

²⁹ See Lane 1949: 337; Georgiev 1975b, 1978; 1979.

³⁰ See A. Scherer, ed., *Die Urheimat der Indogermanen* (1968), a collection of papers by various linguists as well as some historians and archaeologists, which begins with Hirt's paper "Die Heimat der indogermanischen Völker und ihre Wanderungen", dated 1892, and ends with a paper by Marija Gimbutas "Die Indoeuropäer: Archäologische Probleme", dated 1963.

In view of these new data it is pertinent to revise all the theories about the ancient homeland of the Indo-European which have been presented so far. Recently it became clear that the territory of the ancient homeland was probably in the basin of the Danube River and the north coast of the Black Sea. This is a region in which one can find all the elements present in the common IE vocabulary: cattle-breeding and agriculture, high mountains, valleys and seas, snow and summer heat, wolves, bears, tortoises, beech, and birch trees, etc. This theory was confirmed and strengthened by linguists (Burrow, Gornung, Merlingen, and myself), as well as archaeologists (Childe, Filip, Tret'jakov, and Hencken).³¹ It is true that there are still differences between the theories of the individual scholars: thus, for instance, according to Gornung this region comprised a considerable part of the Balkan Peninsula, the middle and lower part of the Danube basin, and the territory of the early Tripol'e culture; Merlingen considers its boundaries to have been within the territory of contemporary Rumania, Bulgaria, and Macedonia; I suggest a far larger territory: but these differences are not essential.

In recent years the comparative-historical method has been the object of much discussion. Its positive and negative aspects and the possibilities for further improvement have been discussed. One question is whether it is correct to consider the inability to use this method to be a deficiency in the method itself. Similarly, some scholars were inclined to criticize this method in terms of lack of sufficient data on which its use could be based, which was defined as an objective drawback. But the lack of the necessary data or of sufficient investigations cannot be considered to be a deficiency of the method itself.

Opponents of the comparative method also existed earlier: at the moment they are predominantly among the Neolinguists and some Structuralists. They claim that this method has already been exhausted and that nothing new can be expected from it.³² The history of IE linguistics in the last thirty years shows that there is no point in getting into polemics as far as such contentions are concerned.

There are different opinions about numerous problems among the Structuralists. There is still much to be clarified, to be defined more precisely, and to be revised.³³ I am definitely opposed to the anti-historical stand. Anti-historicism is now the mark of idealistic philosophy and some adherents of structuralism and neolinguistics share its conceptions. Some Structuralists and Neolinguists spare no words to do damage to comparative-historical linguistics. Hjelmslev (1922:214) wrote: "Comparative grammar is above all a historical grammar... Actually the important thing for every science is the constant, the stable, the unchangeable... Time is an impediment for everything that is not rationalism." For these reasons Structuralists and Neolinguists such as Hjelmslev, Bröndal, Bartoli, Bonfante, etc., fiercely attack the historicism of the Neogrammarians.

³¹ See section 11.5.

³² See Bröndal 1939; Bonfante 1947, *passim*; see also Devoto 1938:375: "Indo-European etymology ('etymology' being understood as 'etymological investigation') is at a standstill."

³³ On structuralism see the criticism by Hansen (1959).

Despite these remarks I do not underestimate the work of the Structuralists and the Neolinguists. Undoubtedly the Structuralists especially have made a considerable contribution to the clarification of many problems. The Structuralists laid the foundations for analyzing the structure of language, and analyzing language as structure (system) is a basic problem in linguistics. The comparative-historical method gives the possibility to reveal the changes in the history of language, makes it possible to uncover the laws of development, but it does not explain the reasons for these changes. It is the study of the structure of the language, i. e., the analysis of the relations of the specific systems in this "system of systems" of which language consists, that enables us to find out the reasons for the changes in the development of language.

The problem of the application of the comparative-historical and structural methods in clarifying the history of language is very topical. Linguistic data undoubtedly require a structural approach. But this fact does not exclude the genuine necessity for comparative-historical analysis with its basic tasks, which require special investigation. The comparative-historical approach has been and will be the main field of IE linguistics, but nevertheless I consider the results obtained on a structural basis to be new and more reliable material as compared to the material obtained before, since it is compiled and systematized on a higher scholarly level and by more up-to-date methods, and thus allows for the structure of language to be revealed in its complexity.

The great merits of the comparative-historical method for linguistics, and more specifically for IE linguistics, cannot be denied. This method laid the foundations of contemporary linguistics: many linguistic problems were solved and are being solved by it. The present state of comparative-historical linguistics is basically different from that during the 19th century and the first half of the 20th century: it made great progress by strengthening and improving its methods of analysis. At the moment there is a need for a new *Grundriss* and a new etymological dictionary, which will reflect the contemporary stage — the *third* period in the development of IE linguistics.

Chapter 2

The Problem of the Gutturals and the *centum-satəm* Theory

2.1. A Critical Survey

About one-third of all the IE words have a guttural stop. Furthermore, the problem of the gutturals is intimately related to the division of the IE languages into *centum* and *satəm*, which is considered to be the basic dialectal distinction among the IE language groups.¹ This shows the great importance of the problem of the gutturals for comparative-historical phonology and for the relationships within the IE language family.

The problem of the IE gutturals was posed for the first time by Ascoli in 1870; during the early 1890's Bezzenger (1890) and Osthoff (1890; 1895), relying on Ascoli's hypothesis, developed the theory of the three series of gutturals: palatals, (plain or pure) velars, and labiovelars. According to this theory, palatals are considered to be the phonemes which in some IE languages (the so-called *centum* languages) appear as velars and in others (the so-called *satəm* languages) appear as sibilants (or affricates), for instance: Gr. *δέκα* and Skt. *daśa* 'ten'. Therefore, one had to accept that the palatals in the so-called *centum* languages have lost their palatal nature. Velars are the consonants which in all IE languages appear as velars, for instance, Gr. *κρέας* 'flesh' = Skt. *kraviḥ* 'raw flesh', and labiovelars are the consonants which in the so-called *centum* languages appear as labiovelars (or labials, dentals), while in the so-called *satəm* languages they appear as velars, for instance: L. *quot* = Skt. *kati* 'how much'. The classification of the gutturals into three series was accepted by K. Brugmann in his *Grundriss* and *Kurze vergleichende Grammatik* and then by the majority of linguists, who considered it to be a highly respectable theory.

Later Pedersen (1900 and 1907-08) tried to prove that these three series of consonants were preserved in Albanian.² However, his examples are not reliable since they all allow another interpretation.

Thus, for instance, Jokl (1917: 144) supported Pedersen against Herman's criticism by giving the following example: "True, Hermann also accepts *s*, *z* as the representatives of the guttural consonants but he refutes the separation of the labiovelars from the plain (or pure) velars before a palatal vowel, accepting that Alb. *k'e*, *g'e* (= *q, gʃ*) have appeared in the analogy of

¹ See, for instance, Buck 1933: 124; Horálek 1955: 69-70. "Gutturals" is a general term for all kinds of *k*-sounds.

² See also Jokl 1937; Solta 1965.

ka, ga. This contention could be supported only by those examples in which the combination velar + back vowel originally existed: but what will the explanation be for cases in which the velar initially was followed by *e*? Such an example is *g'en* (= *gjënj*) 'I find', whose connection with L. *prehendo*, etc., cannot be denied.³ But there is no evidence against the assumption that Alb. *gjënj*, *gjenj* (Geg. *gjëj*) 'I find', *gjendem* 'I find myself' are derived through umlaut³ from **ghud-n-* or **ghond-n-*, cf. Gr. *ἁρδάνω* 'I take', OIr. *re-geinn* 'to find place in' from **ghud-*, all of which belong to the same root (see Pokorny 1951-69: 437-438). At the same time, *en* in L. *prehendo* could be derived from *u* (or *an*), see Georgiev 1977: 226.

Pedersen gives Alb. *kohë* 'time' as an example; he derives it from IE **kēs-* and this explanation is accepted by many specialists in Albanian.⁴ But this word has correspondences only in the so-called *satan* languages, cf. OBG *časū* 'time, hour', and for this reason it is not possible to determine whether it is derived from IE **kēs-*, **kēs-* or **(s)kēt-s-* (Georgiev 1977: 228).

Jokl connects Alb. *dergjëm* 'I am ill' with Lith. *sergū* 'I guard' but this connection is not convincing in terms of semantics and furthermore the shift of IE *s* into Alb. *d* is not probable. Moreover, the *g* is at the end of the stem (root) and the nature of a phoneme in such position is determined by the law of the unification of the allomorphs (see section 2.2; Georgiev 1977: 226).

Alb. *sorrë* 'crow' is derived from **kwērñā* (no labiovelar!), cfr. OBG *soraka* 'magpie' from IE **s(w)orkā* or **kworkā*.⁵

Pisani's (1959b: 101-102) defense of this contention is also not convincing. The only example given by Pisani to illustrate the different treatment of the so-called plain velars is Alb. *qeth* 'to prune' = Lith. *kertū* 'I strike hard', but this example is not convincing because it has to do with a root beginning with a mobile *s*, i. e., **sker-*; see the other Albanian correspondences: *sh-qer* 'to tear', *cars* 'to destroy', *korr*, *kuarr* (**kēr-nō*) 'to cut, harvest', *harr* (**skor-n-*) 'to cut weeds', *hirre* (**skṛ-nā*) 'whey' (see Pokorny 1951-69: 938-910). The original form of Alb. *qeth* (= Lith. *kertū*, etc.) was **skert-ō*:⁶ the mobile *s* disappeared after the palatalization when *k* (before *e*, *i*, *y*) became Alb. *s* (or *th*) while *kʷ* became *s* (before *e*, *i*, *y*), but that was previous to the later shift *sk* > *ks* (> *ss*) > *h*. Pisani himself pointed out that the shift *sk* > *h* was from a later period because it also affected the (ancient) Greek borrowings, see Gr. *γλῶσσα* > Alb. *gjuhë* 'language'.⁷

On the whole, a language which is as heterogeneous as Albanian and which has a history that is hardly known cannot be given as a reliable example to support tripartition. Some linguists, such as Hermann (1907: 32-33), Hirt (1905-06: 6), Thumb (1905-06: 40), Schrijnen (1921: 290), Bartoli (1932: 12, 54; 1940: 229; 1942: 3), Schwyzler (1934-39: 296), Specht (1947: 316; 1948: 12), and others refuted Pedersen's thesis.⁸

³ Cf. Alb. *qen* 'dog' from L. *canis* 'dog'. See Frisk s. v. *κύων*.

⁴ See for instance Solta 1965: 280; Desnickaja 1968: 192.

⁵ See Vasmer 1950-58, s. v. *soroka*. Or from PIE **k(w)erhsneh₂* 'black', cf. Rum. *cioara* 'crow' (Georgiev 1977: 225).

⁶ According to Camaj 1966: 44, Alb. *qeth* is derived from **kart-*. See Georgiev 1977: 227 and below section 2.5.

⁷ See also Solta 1965: 278.

⁸ The treatment of the gutturals in Albanian is discussed in detail in Georgiev 1977, cfr. also Čabej 1972.

The hypothesis of the division of the gutturals into three series cannot be considered to be convincing because it does not solve the problems of the nature of these phonemes and of the peculiarities of their development.

(1) The three series of gutturals are not found in any IE languages. The IE languages make a distinction between only two series of gutturals.

(2) Division of the gutturals into three series does not clarify the phonetic value of the so-called palatals. The hypothetical palatals (the phonemes *k'*, etc.) are compared with the Lith. phonemes *k'* and *g'* (graphically *ki*, *gi*), but *k'* and *g'* appear under the influence of the phonemes which follow them and are not found in clusters such as *k't*. Apart from this, if the gutturals are divided into three series, one has to accept that the velars in the so-called *centum* languages were originally palatals which later were depalatalized, and this is hardly probable.

(3) The most sound argument against the hypothesis of the three series is the fact that in the so-called *satəm* languages there are many cases of words which belong to the same root and which have either a sibilant (or affricate) or a velar. These cases cannot be convincingly explained from the point of view of tripartition. Let us give some examples from the Slavic languages: these examples can be classified into three categories; (a) velars and sibilants in Slavic words from the same root, (b) velars in Slavic words which in other so-called *satəm* languages are sibilants, (c) sibilants in the Slavic languages which in the other so-called *satəm* languages are velars.

(a) Velars and sibilants in the Slavic languages:

bršnqti,⁹ Russ. *brośat'*, *brośit'*: Russ. *brokat'* 'to throw';

cvětŭ 'color, flower': *světŭ* 'light';

gradŭ, Russ. *gorod* 'town': Russ. *zorod* 'fenced place';

kloniti: **sloniti* 'to bend';

krava 'cow': *srŭna* 'doe';

**lysŭ*, Russ. *lysyj* 'bald': *luža* 'ray';

stěnl: *sěnl* 'shadow'.

(b) Velars in the Slavic words versus sibilants (or affricates) in the remainig *satəm* languages:

brĕgŭ 'bank, mound': Av. *barəzō* n. 'mound', *bəraz-* 'hill, mountain';

cĕvŭl 'pipe, tubule': Lith. *šėivd* 'spool';

(d) *zvĕzda*, Pol. *gwiazda*: Lith. *žvaigždĕ* 'star';

gqsl: Lith. *žqsis* 'goose';

iskati: Av. *isaite* 'to look for, to want';

kamy: Skt. *āsmā* 'stone';

kloniti: Skt. *śrāṇayati* 'gives away, presents';

koljq, *klati* 'to prick, to cut': Arm. *ĉelum* 'to cut into two, cut';

kopyto: Skt. *śapha-ḥ* 'hoof';

kosa 'scythe': Skt. *śasati* 'to cut';

kotora 'discussion, row': Skt. *śatru-ḥ* 'enemy';

klŭka, Bulg. *kālka*: Lith. *kūlšĕ*, *kulšis* 'flank, thigh';

kroniti 'to wrap (up)': Skt. *śrāmyati* 'gets tired';

u-kropŭ 'soup': Skt. *śrapayati* 'to cook';

krotŭkŭ 'quiet': Skt. *śrathnāti* 'loosens';

⁹ The words without reference are OBG.

krūna 'food': Lith. *šerti* 'to feed, to bring up', *šeřmens* 'funeral feast';
kūxnoŭi 'to sneeze': Skt. *śvasiti* 'breathes';
**ligati*, Ukr. *po-lihatisja* 'to tie': Alb. *lith*, passiv *lidhem*, L. *ligo* 'to tie';
svekrū: Skt. *śvaśura-h*, Lith. *šėšuras* 'father-in-law';
skokū, *skakati*: Lith. *šokti* 'to jump';
-trūgati, *-trūgnoŭi*: Skt. *tr̥ṇeḥi* 'breaks'.

(c) Sibilants in the Slavic languages versus velars in the remaining *satəm* languages:
ostrū, *osla* (**osila*), Czech. *os-ina*, Bulg. *os-il*: Lith. *akūotas* 'awn';
Serb. *blazina* 'pillow', OPruss. *balsinīs* 'pillow': OPruss. *balgnan*, OLith. *balgnas*, Lith. *balnas* 'saddle', see Pokorny 1951-69: 126.
pīšati 'to write': Skt. *pinkte* 'dyes, paints';
slušaŭi: Lith. *klausyti* 'to listen'.

Many other examples can be given from Slavic or from other so-called *satəm* languages. These examples create difficulties for the adherents of the theory of the three series of gutturals. The authors of the three recent etymological dictionaries of the Slavic languages, Vasmer (*Russisches etymologisches Wörterbuch*, 1950-58), Holub and Kopečný (*Etymologický slovník jazyka českého*, 1959), and Sławski (*Słownik etymologiczny języka polskiego*, 1953-80), give varying explanations for these cases. In some cases they suppose that the words are borrowings from Germanic or that they were influenced by it: this is how, for instance, the word *gqsī* is explained by Vasmer and with certain reluctance by Holub and Kopečný; but Sławski believes that it was inherited. In some other cases a variant of the root is suggested, for instance, in the words *brėgū* (Sławski), *gradū*, *skokū* (Holub and Kopečný); sometimes opinions differ between whether it is a borrowing or a variant, as, for instance, with the words *brėgū* (Vasmer, Holub and Kopečný) and *črėda* (Vasmer). There is also a hypothesis of the existence of doublet forms for *cvětū* — *světū*, *kamy* — *āsmā*, *cěvi* — *šeivā* (Holub and Kopečný, Vasmer). Very often the dictionaries simply state the facts without any explanations, as for instance with the words *gradū* (Sławski, Vasmer), *krava* (Vasmer) and *svekrū* (Holub and Kopečný, Vasmer). Finally, due to these peculiarities, the authors have doubts as to the correctness of the etymology or they refute it entirely, as in the case with such words as *kosa* — *śasati* (Holub and Kopečný, Vasmer), *kopyto* — *śapha-h*, *kotora* — *śatru-h*, *kruma* — *šerti*, *stěni* — *sěni* (Holub and Kopečný).

Actually indications as "variant" or "doublet form" are not explanations at all: they are only statements of the facts. However, it is not advisable to express doubts or to deny these etymologies since in the majority of cases the evidence is irrefutable. Explaining these cases as being borrowings from the Germanic languages cannot be considered compatible with the facts. In the Slavic languages there are certainly many Germanic borrowings but in these particular cases borrowings are out of the question for many reasons. Thus, for instance, if one accepts that words with a velar in the root **g^herd^h-*, to which OBG *gradū* belongs, are borrowings from Germanic, then OBG *žrīli* and Russ. *žerd^h*, which derive from the same root¹⁰ and which have an IE velar, *g^h* > Slav. *ž*, cannot be explained. The OBG form **žirdi* from Balto-Slav. **girdi-s* cannot be explained on the basis of the historical phonology of Germanic. In Germanic only the following vowel gradation is possible: *er* from IE *er*, *ar* from IE *or*, *ur* from IE *r*,

¹⁰ See Vasmer 1950-58: 1,419; Kiparsky 1934: 104.

from which the form *ir* cannot be derived. The Slavic *ir* from *ir* is correctly derived from IE *r*: IE **g^hrd^hi-s* > Balto-Slav. **girdis* > Slav. **žirdi*. Furthermore, one also comes across Indo-Iranian words of the same root with the velar preserved, cf. Skt. *gr̥ha-* 'house, home' and Av. *garāda-* 'cave, habitat of the Daevidian creatures'.

The Slavic words *svekrū* 'father-in-law' and **čerdā* 'row, herd' (Bulg. *čerda* 'herd', etc.) cannot be explained as Germanic borrowings since in Germanic they would have been **swehr-* or **herdō*, from which one would expect Slav. **svexr-* and *šerdā*.¹¹

OBG *kamy*¹² = Lith. *akmuō* 'stone' cannot be a borrowing from Germanic since, due to consonant shift, this word would have been **ahmō*; Germanic *h* was borrowed in Slavic as *x* and not as *k*.

These facts show that the forms with a velar in the Slavic languages cannot be Germanic borrowings: on the contrary, these are words which were inherited in Slavic from the common IE vocabulary.

Similar examples can be given from other so-called *satem* languages in which it is not possible to assume that there was a Germanic influence, for instance the following Sanskrit words:

adrāk aor., Alb. *dritë* 'light' from **dṛk-tā*: Skt. *adr̥śat* aor., *dṛśayati* 'pretends, shows', see Wackernagel 1896: 162; Pokorny 1951-69: 213.

bhiṣāk 'curing, healing, physician', *bhiṣakti* 'heals': *bheṣaja-* = Av. *baēšaza-* 'healing', *bišazāni* 'I must heal', *baēšazya-* 'heal', see Brugmann 1897-1916: 545; Mayrhofer 1953-73, s. v.

dēgdhi 3rd pers. sing. pres. 'smears, anoints', *digdhā-* part.: Av. *pairi-daēzayeiti* 'builds around', *-dišta-* part., Old Pers. *didā* 'fortress'; see Pokorny 1951-69: 224; Mayrhofer 1953-73: 43-44.

dik 'direction, quarter': *diśi* loc., *diśāti* 'shows, brings forward, exhibits', see Mayrhofer 1953-73: 43-44.

gr̥ha- (from **gr̥dha-*) 'house', Av. *garāda-* 'cave', OBG *gradū* 'city': Lith. *žar̥das* 'shed, stable', see Pokorny 1951-69: 444.

jāgara or *jagara* perf., *jāratī* 'makes old, grows old, decays', *jāran* 'old, decayed' = Ossetian *zārond* 'old', Av. *a-zar̥š-ant-* 'not becoming old'; see Wackernagel 1896: 162.

jighaya perf. from *hinoti* 'throws, pushes', *hita-* participle, *heman-* 'effort' = Av. *zaē-man-* 'agile, stormy, force', see Wackernagel 1896: 162.

karṇa- 'ear, lobe', Lith. *klausyti* 'to hear', Alb. *quhem* 'to be called, to be named': Skt. *śṛnoti* 'to hear' (**k_ṛ-neu-*), *śrotra-* 'ear'; see Pokorny 1951-69: 605-606.

karbara-, *karvara-* (*kabara-*, *karbura-*, *karbu-*) 'spotted, variegated': *śarvara-* 'variegated' (*v* instead of *b*); see Pokorny 1951-69: 578 (but Mayrhofer 1953-73: 175 has suspicions about it).

kāuti 'cries', Lith. *kaūkti* 'to howl': Skt. *śuka-ḷi* 'parrot', Lith. *šaukti* 'to cry', see Pokorny 1951-69: 535-539.

klam- = *śram-* 'to be tired', see Burrow 1955: 75.

nir-mārga- 'wearing out, poor thing', *ni-mṛgra-* 'squeezing, tight': *mārjyati*, *mṛjati*, *marṣi* 'rubs, wipes, polishes', Av. *mār̥zaiti*, *mar̥zaiti* 'touches', see Pokorny 1951-69: 722.

pinkte 'dyes, paints': *pimsāti* 'hews out, carves, prepares, adorns, forms, fashions', see Pokorny 1951-69: 794.

pra-ṇak aor., Av. *anaxštā* 3rd pers. sing. sigm. aor. med.: Skt. *nāśati* 'reaches, acquiesces', Av. *nāšima* 1st pers. subj. act.

¹¹ See Kiparsky 1934: 105.

¹² On metathesis see Georgiev 1964d: 14.

roka-ḥ 'light', *rocana-* 'giving light', *rocate* 'shines': *ruśant-* 'bright', Slav. *lysü*, Russ. *lysyj* 'bald'; Pokorny 1951-69: 678-690; Burrow 1955: 75.

rekḥā 'line', *rikhāti* 'scratches': *riśāti* 'tears, plucks off', see Pokorny 1951-69: 858; Mayrhofer 1953-73: 63.

rujati 'breaks, shatters', *rugṇa-* 'broken', *roga-ḥ* 'drawback, illness', Av. *-uruxti-* 'breaking, tearing': Lith. *laužiti*, *laužti* 'to break', *lūžis* 'chip breaking', see Pokorny 1951-69: 686; Mayrhofer 1953-73: 647.

sagṇoti 'can bear', Av. *a-zgata-* 'unvanquished': Skt. *sahate* 'conquers, can', *sahas-* 'power, victory', Av. *hazah-* 'power, violence, robbery', see Hübschmann 1877: 392; J. Schmidt 1881: 116; Bartholomae 1895-1901: 23.

sarga-ḥ 'put into movement, pouring out': *sarjati* 'leaves, pours', *sr̥ṣṭa-* part., Av. *harəzaiti* 'leaves, sends', see Pokorny 1951-69: 900.

yāga- 'sacrifice', *ṛtv-ik* 'one making sacrifice according to the rules': *yājati* 'worships, offers, hallows', Av. *yazaiti* 'worships', see Pokorny 1951-69: 501.

In his book *The Sanskrit Language*, Burrow says the following about the so-called velar series (1955: 75-76): "The assumption of the third series has been a convenience for the theoreticians, but is unlikely to correspond to historical fact... Clearly a theory which leaves almost as many irregularities as it clears away is not very soundly established."

In general we come upon cases such as these in the Indo-Iranian languages just as frequently as in the Slavic languages. The supposition that they have to be explained in Indo-Iranian as borrowings from an unknown IE *centum* language is quite improbable. Such an explanation is impossible as far as forms from the same paradigm go, as for instance, nom. *dik* and loc. *diśi*, aor. *adrāk* and *adarśat*, nom. *dṛk* 'seeing, f. sight, view' and loc. *dṛś-i*, etc.

The reason for all the unsatisfactory and controversial explanations which have been given by the authors of the new Slavic etymological dictionaries is rooted exclusively in the erroneous theory of the three series of gutturals. Such difficulties are inevitable because it is impossible to clarify the velar-sibilant (or affricate) parallels in the *satəm* languages on the basis of the theory of tripartition; at best these parallels should be considered to be borrowings from some *centum* language: this is the logical consequence of this theory because it puts hard-and-fast barriers between the so-called palatals and velars. Thus the hypothesis of tripartition of the IE gutturals does not give a satisfactory explanation for the facts and that is why the theory itself cannot be considered convincing.

As early as 1873 Fick (1873: 4-34) tried to substantiate the theory of two series of gutturals. Later Havet (1875: 267) made an attempt to support this theory with new data.

Fick and Havet's thesis was accepted with certain corrections by Meillet (1893)¹³ and it became respected by the French linguistic school. According to this theory, the gutturals are classified into two series: prepalatals and postpalatals-labiovelars. The existence of parallel forms with velars in the *centum* and *satəm* languages is explained by the depalatalization of the prepalatals.

Meillet attempted to explain the presence of velars in OBG words such as *gosi*, (*d*)*zvězda* (Pol. *gwiazda*), *kosü*, *kosa*, *svekrü*, (*d*)*zvizdati* (Czech

¹³ See also Meillet and Vaillant 1934: 27.

hvizdati) as being the result of dissimilation due to the following or preceding sibilant.¹⁴ This hypothesis is not convincing¹⁵: for one thing it cannot explain the numerous examples in the Slavic languages in which the velar is retained, and for another it does not solve the problem of similar cases in the other so-called *satəm* languages, and finally, in the Slavic languages there are cases which contradict this explanation, as for instance OBG *sluxū* from **klewso-s*: Skt. *śroṣati*; OBG *sūsū*, *sysati*: L. *sūcus*, Goth. *su-gan* (IE **suk-*); OBG *srīsti*: OHG *hursti* (IE **kṛsti-s*); OBG *svīstū* from IE **kweys-to-s*.¹⁶ Actually Meillet's thesis is based on six examples, but four other examples contradict his explanations.

Fick and Havet's theory on the classification of the gutturals into two series is undoubtedly correct. It is based on the fact that there is no IE language in which there are more than two series of such phonemes. Nevertheless Fick and Havet could not solve the problem of the nature of the so-called palatals (they also thought that these consonants were depalatalized in the *centum* languages), nor could they solve the problem of the reasons which determine the appearance of the sibilants (or affricates) in the so-called *satəm* languages. Furthermore, Kuryłowicz (1956: 356) convincingly proved the impossibility of the prepalatal-labiovelar (*k'-k^w*) correlation; the correct correlations are *k-k'* or *k-k^w*.

There is also a hypothesis of one series of gutturals. Its adherents, Riebezzo (1922-23), Mladenov (1936: 189-190), and Safarewicz (1945: 37),¹⁷ give different explanations for the origin of the labiovelars. This hypothesis could hardly be acceptable since the arguments supporting the secondary origin of the labiovelars are not convincing.

Finally, mention should be made of Kuryłowicz (1935: 1-3; 1938; 1956: 356-375) hypothesis, according to which the initial position was almost the same as in the so-called *satəm* languages, i. e., there were two series of gutturals: velars (*k*) and palatals (*k'*); the labiovelars (*k^w*, etc.) in the so-called *centum* languages appeared at a second stage before *e* and *i* (1956: 401). This hypothesis is improbable: examples are known from the comparative-historical phonology of various languages in which the labiovelars (*k^w*) have been delabialized, for instance L. *qu* > Fr. *k*, but there are no cases of the shift of velars (*k*) into labiovelars (*k^w*); moreover, this point of view cannot explain the existence of IE roots, as for instance **g^wadh-*, *(*s*)*k^walo-s*, etc. See Miller 1976: 47-9 and also as regards the impossible thesis of Magnusson (*k'* and *k^w* ??) 55-60.

2.2. The Law of Palatalization

Data from historical phonology show that the most frequent (and probably the only) reason for the shift of velars into sibilants (or affricates) is the law of **palatalization**, a phonetic phenomenon which occurs very frequently. Such shifts are observed in all the IE languages, for instance: Umbr. *pase* = L. *pace*; Fr. *cent* (*c* = *s*), Ital. *cento* (*c* = *č*), dial. *šento*, Span. *cien(to)*

¹⁴ See Meillet 1893: 374; 1902-05: 178.

¹⁵ See Vasmer 1925: 54-57; Bräuer 1961: 169-171.

¹⁶ See Vasmer 1950-58: 1, 324; Kiparsky 1934: 106.

¹⁷ See also Specht 1947: 316-317; Szemerényi 1970: 14.

($c=p$); Gr. dial. (Cypr.) *oĩs*=Att. *ũs* from $*k^w i-s$; Mod. Gr. dial. *čefali*=*κεφάλι*, *ajelos*=*ἄγγελος*; Balto-Slav.: Lett. *celt*=Lith. *kėlti*; Old Frisian *sze-tel* (*tsetel*), *witsing*=G. *Kessel*, *Wiking*; the same in Swed.; Arm. *k'ir* 'sister', *gini* 'wine' > dial. *čir*, *džhini*; Alb. *qen* 'dog' > dial. *šen*, *gjarpën* 'snake' > dial. *žarpën*.

An explanation for all the specific features in the changes of the gutturals can only be given by the thesis that the original velars shifted into affricates or sibilants in the so-called *satəm* languages as the result of palatalization.

The history of the Romance languages gives exact parallels on this phenomenon. The two series of gutturals in Latin—velars and labiovelars (for instance *cantare*, *centum*, *quis*, *quattuor*), and their development in the Romance languages due to assibilation, delabialization, and the processes of the unification of the split (bifurcated) root—repeat the development of the IE gutturals in the so-called *satəm* languages. *Centum* and *satəm* languages can also be discerned in the Romance languages on the basis of the correlation of velars and sibilants (affricates). Thus, for instance, French is a *satəm* language because the Latin labiovelars have become delabialized while the Latin velars have been preserved or have shifted into sibilants, for instance Fr. *qui*=*ki*, Ital. *cantare*=Fr. *chanter*, but Ital. *accento*=Fr. *accent* (velar and affricate or sibilant in words of the same root), Ital. *borghese*=Fr. *bourgeois* (in Italian the velar is preserved, in French it turned into a sibilant), Fr. *cent*=*sā*, *ça*, *cela*=*sla* (sibilant before *a* or consonant), etc. However, Logudorian (in Sardinia) and Dalmatian (Vegliotic), which has died out, are *centum* languages because the velars are preserved as seen, for instance, in Logudorian *dulke*—Ital. *dolce* from L. *dulce(m)*.

The one and only correct conclusion is as follows: in IE there were **two series of guttural stops**: velars (*k*) and labiovelars (k^w , i. e., velars with a bilabial appendix, labialized velars). The sibilants or affricates in some IE languages have developed from the velars following the law of palatalization.

The process of the palatalization of the velars before *e*, *i*, *y* usually is as follows:

$$k > k' > t' > \begin{cases} tp > p \\ \acute{c} > \acute{s} \text{ (palatal)} > s \\ \check{c} > \check{s} \end{cases}$$

Consequently, the affricates (Skt. *j*, Arm. *c*, *f*) are a more archaic stage of development than the sibilants (OPers., Alb. *p*, *d*, Skt. *ś*, *h*, Av., Slav., Arm., Alb. *s*, *z*, Lith. *š*, *ž*). Formerly it was thought that Skt. *j* (affricate) was derived from Indo-Iranian *ž* (sibilant).¹⁸ This supposition is erroneous. Recently it was discovered that contemporary Indic languages have preserved the older stage of development of the Skt. *ś*, i. e., the affricate, cf. Kafiri (Dardian) *duć* (*ć=ts*)=Skt. *daśa* 'ten', Kafiri *ćuna*=Skt. *śun-* 'dog'.¹⁹

In some IE languages there were two basic processes of palatalization (and assibilation). According to Slavic linguistic terminology, one can distinguish between the **first** and the **second palatalization**. The first palata-

¹⁸ See Brugmann 1897-1916; 1, 556; Thumb and Hirt 1934: 95.

¹⁹ See Burrow 1955: 32; Rysiewicz 1956: 284-285.

lization caused the shift of the primary velars: IE **ǵekm* > Balto-Slav. **dekim* > Lith. *dēsim(ts)*, OBG *dese(-ti)* 'ten'; the second palatalization affected the velars which were the result of the delabialization of the original labiovelars: IE **kʷetūres* > Balto-Slav. **ketūres* (> Lith. *keturi*) > Slav. *četyre* 'four'.

It is possible to approximately date the period of the palatalization of the original velars and labiovelars at least for Sanskrit (and Indo-Iranian). The first palatalization and assibilation in Sanskrit (or Indo-Iranian) happened before the shift *e* > *a* and before the shift *kʷe* > *ke* > *če*: if the labiovelar was delabialized when the velar was not yet palatalized, as for instance in Skt. *ka-h* 'who' from **kʷo-s* and *kalyá-h* 'healthy, strong' from **kalyo-s*, then *ke* from *kʷe* also had to shift into *še*.

The shift *e* > *a* and the preceding shift *ke* > *če* had already taken place during the first half of the 2nd millennium B. C., as seen in *panza* (in Hittite documents from the 14th century B. C.) = Skt. *panca* 'five' and *Šurias* (in Babylonian texts from the middle of the 18th century B. C.) = Skt. *sūryas* 'sun'.²⁰ If the shift *e* > *a* had taken place towards the end of the 3rd millennium (about 2200-2000 B.C.), in that case the preceding shift *ke* > *če* took place approximately between 2400 and 2200 B. C.²¹ Before this shift the delabialization of the labiovelars (*kʷe* > *ke*) took place approximately between 2600 and 2400 B. C. This means that the first palatalization (and assibilation) of the velars in Sanskrit (and in Indo-Iranian), i. e., the shift *k* > (*k'* > *č*) > *ś*, did not take place later than the first half of the 3rd or the end of the 4th millennium B.C.

As early as 1881 J. Schmidt (1881: 114-115) attempted to prove the existence of two series of gutturals and the palatalization of the velars. This theory was exposed in detail and supplemented by Hirt (1899); later it was incorporated in Hirt's *Indogermanische Grammatik* (1921-37: 1, 226-241) in a more concise form and with important improvements in terms of precision. When Schmidt wrote his article the facts were not yet fully investigated and systematized and his thesis could not be completely proved at that time. Furthermore Hirt was also not able to clarify the facts more exhaustively: he limited his investigations to the range of the initial consonants; he could not solve the problem of the clusters *sk*, *kl*, *kʷ*, etc., as well as certain particularities of the labiovelars; he could not systematically follow the application of the morphological law of the unification of the split (bifurcated) root; he did not elucidate some details; he did not realize that the theory of the classification of the IE languages into the *centum* and *satem* dialect groups loses its importance if the treatment of the IE gutturals is explained by the law of palatalization. For these reasons Schmidt and Hirt's thesis did not appear to be convincing and did not gain adherents. The theory of the tripartition of the gutturals continued to be considered the authoritative theory.

In "The Indo-European Gutturals" (1932) as well as in some other publications (1937; 1957d) I tried to exhaustively analyze this problem and came to the conclusion that in IE, at least in its final stage before the 'dis-

²⁰ See section 10.4.1.

²¹ As is evident from the history of Latin, the shift *ke* > *ce* (= *tse*) and *če* took place during a period of three or four centuries. We accept the shorter periods here.

'integration' into separate linguistic groups, there were two series of gutturals — velars and labiovelars — and that in some language groups the sibilants and the affricates appeared independently as a result of palatalization. The basic results of this conception were accepted by Machek (1939: 185-186), Bartoli (1940: 324-325; 1942: 23-24), and others.²²

Palatalization (and assibilation) usually occurs before the vowels *e*, *i*, and the semi-vowel *y*. This can be illustrated by the following examples:

Skt. *śēte* = Gr. *σεῖται* 'lies' from **key-*;

Skt. *paśyāti* 'sees' from **pekyeti*: L. *specio* 'I see' ;

Skt. *dadārśa* = Gr. *δέδορκε* 3rd pers. sing. perf. 'he saw' ;

Skt. *jārant-* 'old', Arm. *cer* 'old man': Gr. *γέρον* 'old man' ;

Skt. *jōṣati* 'is fond of, likes, enjoys' from IE **gəws-*: Gr. *γύω* 'I give a taste', Goth. *kīusan* 'to choose' ;

Skt. *ājati* 'drives' = Av. *azaiti* from IE **agetī*: Gr. *ἄγω* L. *ago* 'I load, carry' ;

Skt. *hēman* (loc.) 'in winter', Alb. Gegan *dimën*, Lith. *žiemà*, OBG *zima* 'winter' from **ghey-m-*; Av. *zyā*, Arm. *jiun* 'snow' from **gh(i)yōm*; Skt. *himā-h* 'frost, snow'.

The velar remains before *a*, *o*, *u* and before a consonant, for instance:

Skt. *kevaṭa-h* 'cave, hollow': Gr. *καταρα* pl. 'precipices, chasms' ;

Skt. *kalya-h* 'healthy, clever': Gr. *καλός* 'pretty' ;

Skt. *kakūbh-* 'peak, summit': L. *cacūmen* 'peak' ;

Skt. *kalāyati* 'impels, bears, carries, does' from IE **koleyeti*: Gr. *κέλλω* 'I impel', L. *celer* 'fast, quick' ;

Skt. *kavī-h* 'skillful, wise; m. seer, sage, poet': Gr. *κοῖης* 'priest in the mysteries' from **kowi-ā(s)*, *κοέω* 'I mark, perceive, hear' ;

Skt. *kūpyati* 'is excited, is angry': L. *cupio* 'I desire, long for' ;

Skt. *gūñjati* 'buzzes, hums': Gr. *γογγύζω* 'I mutter, murmur, grumble'.

The velar-sibilant correspondences which create unsurmountable difficulties for the other theories are quite normal from our point of view, for instance:

Slav. *kosa* 'scythe' from **kosā* with the velar regularly preserved before *o*, but Skt. *śāsati* 'slaughters, cuts down' from **keseti* with a sibilant before an original *e* ;

Skt. *jighaya* perf. (with reduplication and ablaut *o* [of the type of Hom. *πείπειθα* from *πειθω*]), but Skt. *hāyati* 'pushes, pursues' from **ghēyeti*, *hinōti* 'throws, pushes' from **ghi-nēw-ti*, *hitā-h* part. from **ghi-tō-s*, *hēman-* n. 'effort', Av. *zaēman-* 'agile, stormy n., power' from **ghēy-men-* ;

Slav. *čevī* 'pipe, tubule' from *(*s*)*kōywi-s*, but Lith. *šeivá* 'spool' from *(*s*)*kēywā* ;

Lith. *akūotas* 'awn' from **ak-ōto-*, OPruss. *ackons* 'carex' from **ak-ōno-*, but Bulg. *os-il*, Czech *os-ina* 'awn', Arm. *asetn* 'needle' from **ak-ī-* ;

Slav. *krūma* 'food' from Balto-Slav. **kurmā* < IE **kṛmā*, but Lith. *šerti* 'feed', *šeřmens* 'funeral banquet' from **kerm-* ;

Skt. *piñkte* 'dyes, paints' from **pink-toy*, but Skt. *piṃśāti* 'hews out, carves, prepares, adorns, forms, fashions' from **pink-ē-ti*, *peśaḥ* 'form, color' = Av. *pāśah-* n. 'decorating' from **peyk-es-* (stem in *-es-*), Slav. *pišo* = Lith. *piešiti* 'to draw, write' from **peyk-yō* Slav. *pisimo* = Lith. *piešimas* 'drawing' from **peyki-mo-*, etc. ;

Skt. *karbura-* 'spotted, variegated' from **korbu-ro-*, but *sārvara-* 'variegated' from **kérbero-* ;

Skt. *dik* 'direction, quater' nom. from **dik-s*, but loc. sing. *dīs-i* ;

Skt. *ḍṛk* 'seeing; f. sight, view' from **ḍṛk-s*, but loc. sing. *ḍṛś-i* ;

²² See also Szemerényi 1970: 138-139.

Skt. *yāga-h* 'sacrifice' from **yāgo-s* with the velar preserved before an original *o* but Skt. *yājati*, Av. *yazaitē* 'worships, honours with sacrifice and prayers' from **yageti* with an affricate or sibilant before an original *e*;

Skt. *sarga-h* 'putting into motion, pouring out' from **solgo-s* with the velar preserved before an original *o*, but *sarjati* 'leaves, drops, pours out' from **selgeti*, Av. *harəzaiti* 'drops, sends' from **sḷgeti*;

Skt. *dēgdhi* (3rd pers. sing.) 'smears, anoints' from IE **dʰeygh ti*, *digdhá-* part. from IE **dʰigh-tó-* with the velar preserved before a consonant, but Av. *pairi-daezayeti* 'builds around' from **dʰeyghēyeti* with a sibilant before an original *e*;

Skt. *saghnóti* 'can bear' with *gh* before a consonant, but Skt. *sáhate* 'conquers, can bear' from **seghetoy*, Av. *hazah-* n. 'violence, robbery' from **seghes-*;

Skt. *bhīṣak* 'curing, healing; m. physician' with *-k* from *-gs*, *bhīṣakti* 'heals' with *-kti* from *-g-ti*, but *bhīṣajyati* = Av. *baēšazya-* 'to heal' from *-g-ye-*.

Slav. *brěgŭ* 'bank, slope' from **bʰergho-s* (*-o*-stem), but Av. *barazah-* n. 'mound, hillock' from **bʰerghes-* (stem in *-es-*), Skt. *barháyati* (caus.) 'increases' from **bʰerghēyeti*;

Slav. *klŭka*, Bulg. *kálka* 'thigh' with the velar preserved before an original *ā*, but Lith. *kulšis*, *kūlšė* 'thigh, flank'; etc.

In Indo-Iranian and Balto-Slavic (and probably also in Albanian and Armenian) the velars had been palatalized not only immediately before *e*, *i*, *y* but also in the clusters *kw*, *kl*, *kr*, *kn*, *km*, (*gw*, *gl*, etc.) followed by *e*, *i*, *y*. The palatalization in the clusters *kle*, *kre*, etc., was proved by Machek (1939:186—187): it takes place in the clusters *kwe*, *kwi*, *gwe*, etc. This palatalization has passed through the following stages: *kle* > *kl'e* > *k'l'e* > *č'l'e* > *š'l'e* > *sle*. It corresponds to the palatalization of the velars before *v* + *e*, *i* in the (Southern and Eastern) Slavic languages: Slav. *kvi*, *gvi* > Southern and Eastern Slav. *k'v'i*, *g'v'i* > *cvi*, (*d*)*zvi*; it also corresponds to the palatalization in Lith. *kniaūstis* = *k'n'iaūstis*, *ugnis* = *ug'n'is*, etc., as well as to the palatalization in Greek: IE *kʷ*, *kw* (Myc. *q*) + *e*, *i* > *t'w'e/i* > Ion.) Att. *τε*, *υ*. This is the explanation for correspondences such as:

Lith. *klausau*, *klausyti* 'hear' from **klow-s-*, Alb. *quhem* 'I am called' from **klu-s-*, Skt. *karṇa-h* 'ear' from **kol-no-s* with the velar preserved in the clusters **klow-*, **klu-* or **kol-*, but Skt. *śrávas-* 'glory', OBG *slovo* 'word', Skt. *śroṣati* 'hears', OBG *sluṣati* 'to hear', Skt. *śró-tra-m* 'ear' from **klew-*.

Skt. *śrāṇayati* 'gives away, presents' from **klēneyeti*, but OBG *kloniti* 'to bow' from **klān-i-*.

Skt. *śleṣayati* 'welds, collects' from **kleyseyeti*, but Slav. *klěsiti* 'to weld' from **kloy s-i-*, Czech *s-klesnouti*.

Skt. *ślāghate* 'confides, trusts (in)' from **klēgh-*, but Old Czech *klazniti* 'tells on tricks' from **klōgh-ni-*.

OBG *klētŭ*, Lith. *klīētis*, Lett. *klēts*, Lith. *klaĩmas* from **kloy-*, but Lith. *šlītė* from **kli-*.

Skt. *śrāmyati* 'becomes weary' from **krēmyeti*, but Slav. *kromiti* 'to curb' from **kro-m-i-* or **kram-i-*.

Skt. *śrapáyati* 'prepares, cooks' from **krepeyeti*, but OBG *kropŭ* 'soup' from **kropo-s*.

Skt. *śrathnāti* 'is loosened, becomes slack, gives way' from **krēth-*, but OBG *krotiti* 'to tame' from **kroth-i-*.

Skt. *śvasiti* 'breathes' from **kweshti*, but OBG *kūxnŋti* 'to sneeze' from **kush-n-*.

Skt. *hrāduni-* 'hail' from **ghrēd-*, but OBG *gradŭ* 'hail' from **ghrōd-*.

OBG *cvětŭ*, Czech *květ* 'flower' from **kwoyto-s*, but Skt. *śvit-na-*, *śvit-ra-* 'white'. OBG *svltēti* 'to light' from **kwit-*, Skt. *śvetā-h* = Goth. *hweits* 'white' from **kweyto-s*.

Thus, words such as Lith. *žvėris*, OBG *zvėrī* 'beast' from **ghwēr-* regularly have a sibilant derived from an IE velar.

The bipartition (velars and labiovelars) and the palatalization are confirmed phonologically ($k \rightarrow k^w$ or $k' \rightarrow k$ but not $k \rightarrow k' \rightarrow k^w$) and statistically. On the basis of Pokorny 1951-69 (with certain amendments and additions) the following statistics could be drawn up: there are 748 roots with a velar (according to the tripartition velar or palatal) which in the so-called *satəm* languages is preserved or which appears as a sibilant. If we mark the preserved velar with K, the assibilated consonant with K', a liquid, nasal or *w* with L, a front vowel or *y* with E, and a back vowel or consonant with A, we obtain the following distribution:

K'(L)E (e. g., *key-*, *kley-*, *kwey-*) = 186
 KA (e. g., **kakubh-*) = 380
sk (e. g., **sker-*) = 41 (see section 2.4.3)
 K — K' (e. g., Lith. *klaus-* = Slav. *sluš-*) = 133
 KE (e. g., **gerebh-*) = 8

These statistics clearly show the existence of two series of gutturals in the IE languages: velars (k , g , g^h) and labiovelars (k^w , g^w , g^{wh}). In some languages, i. e., in the so-called *satəm* languages, the velars were palatalized before *e*, *i*, *y* and later were assibilated.

This explanation gives not only a correct concept of the phonematic system of common IE but also opens new possibilities for etymological investigation, especially in the field of the so-called *satəm* languages. At the same time it refutes the *centum-satəm* theory and contributes to the correct assignment of the position of Slavic (and Baltic) among Germanic and Iranian.

Obviously the situation in common IE and the changes in the so-called *satəm* languages were the same in this respect as the changes in Latin and the Romance languages: French is a *satəm* language just as Sanskrit is.

2.3. The Morphological Law of the Unification of the Bifurcated (Split) Root

Since palatalization (and later assibilation) took place only in combination with specific phonemes (usually before *e*, *i*, *y*) it caused a split in the phonematic structure of the root (and of the stem). Thus, for instance, the root of the OBG verb *pekq* 'I bake' appears as *pek-* and *peč-*: OBG *pekq*, *pečeši*, *pečetū*, etc., Bulg. *peka*, *pečeš*, *peče*, Russ. *peku*, *pečeš*, *pečet*, etc. Against this split in the root or the stem, which is caused by phonematic laws, a morphological law begins to function: this law is the law of unification of the split (bifurcated) root (or stem) or of the normalization of the paradigm (neutralization of the allomorphs). Thus, under the influence of *peč-* in *pečeš*, *peče*, etc., in Bulgarian colloquial speech *č* appears in cases where from the point of view of palatalization one would expect *k*, e. g., sing. *peča*, *pečeš*, *peče*, pl. *pečem*, *pečete*, *pečat*, similarly *moža*, *možeš*, *može*, *možem*, *možete*, *možat*, even *možli* instead of *mogli* from the verb *moga* 'I may'. The same happened in Sanskrit, e. g., *pacāmi* 'I cook', *pacasi*, *pacati* instead of **pakami* (from **pek^w-o-mi*), *pacasi* (from **pek^w-esi*), even *vacmi* 'I speak' (instead of **vakmi*), *vakṣi*, *vakti*. See also Skt. voc. sing. *vr̥ka* instead of

**vr̥ca* from **wl̥kʷe*, under the influence of nom. *vr̥kaḥ* 'wolf' from **wl̥kʷo-s*; *akar* (3rd pers. sing. aor.) from **e-kʷer-t*, *agamat* (3rd pers. sing. aor.) from **egʷem-e-t*, but Av. *corat*, *jimat*, etc.

The process of the unification of the root or stem is regular in all cases of this split or bifurcation due to palatalization. This is a **natural reaction to this split**, that is, the specific regularity in the development of the phonematic structure of the words. This morphonological law — the neutralization of the allomorphs — functions in all cases of split or bifurcation of the root or the stem due to palatalization.

The process of the unification of the split root or stem is quite slow. In general the more remote the time of the split is, the greater the field of unification will be. Thus in the oldest stage of Sanskrit we very often find affricates (*c*, *j*, *h*) instead of velars (*k*, *g*, *gh*) from IE labiovelars, e. g., *pacāmi*, *pacanti*, *pecuḥ*, *vacmi*, etc. This shows that the change of the velars into affricates, i. e., their palatalization before *e*, *i*, *y*, took place at a very remote time. This supposition is confirmed by the presence of affricates as early as the middle of the 2nd millennium B.C., recorded in words which were borrowed from Proto-Indic, such as Hitt. *panza* 'five' with *z* (= *ts*) instead of *c* (= *tš*), since there was no phoneme *c* (= *tš*), in Hittite. Bearing in mind the fact that the shift *ke* > *če* took place before the shift *e* > *a*, which took a long period of time to occur, one concludes that palatalization (and assibilation) took place in Indo-Iranian not later than the end of the 3rd millennium B.C. On the contrary, in OBG the original position was very well preserved, e. g., *moga* 'I may', *možeši*, *možetŭ*, etc., and it is only in contemporary colloquial Bulgarian that there are new forms such as *peča*, *moža*, *možli* instead of *peka*, *moga*, *mogli*. This fact confirms that the shift of the Slavic phonemes *k*, *g*, *x* before *e*, *i*, *y* into *č*, *ž*, *š*, i. e., the so-called first Slavic palatalization, took place in a period which was not very remote from the period in which the oldest written records (9th century A. D.) were set down.

The palatalization (assibilation) of the IE velars in the languages we have analyzed took place during a very remote period. Thus, for instance, if one assumes that the palatalization of the delabialized labiovelars had taken place in Indo-Iranian in the 3rd millennium B.C., the palatalization (and assibilation) of the original velars (*k* > *k'* > *č* > *š*) must have taken place much earlier, that is, before the change of the labiovelars into velars (*kʷ* > *k*), because if the labiovelars had already been delabialized they would have undergone the same changes as the velars. If one accepts that *k* (from *kʷ*) became *č* before *e*, *i*, *y* during the 3rd millennium B.C., then IE *k* most probably shifted into *k* > *č* > *š* not later than the end of the 4th millennium B.C.

Therefore, the first palatalization and assibilation of the IE velars had taken place in some IE languages at a very early time. The process of the unification of the split root or stem had functioned for quite a long period of time and often had obscured the reason for the change of the velars into sibilants (or affricates). The regular results of palatalization were preserved only in these words which did not belong to any system, which in some way had remained isolated and thus were able to avoid the influence of the law of the unification of the allomorphs. These isolated words have to a great degree lost their relationships within the fami-

lies of words, to which they belonged, with the result that these relationships are no longer evident, and thus it was easy to reach erroneous conclusions — and indeed this actually happened (the theory of the three series of gutturals).

Therefore, such forms as Skt. aor. *adr̥śat* = Gr. ἔδρακε, Skt. perf. *da-dārśa* = Gr. δέδορακε, Skt. pass. *dr̥śyate*, caus. *darśáyati* regularly have a sibilant before IE *e* or *y*. The original velar in the form for the future *drak-syāmi* was preserved quite regularly because it was in an especially favorable position due to the dissimilatory influence of the following *s*; it was also preserved in the aorist *a-drāk* (*k* from *-kst* 3rd pers. and *-kss* 2nd pers. sing. aor.), in the Vedic adjective *-dr̥k* (masculine and feminine from *-ks*, neuter from *-k*), etc.

In all other cases unification (neutralization of the allomorphs) took place: part. *dr̥ś-ta-h*, inf. *dras̥-ṭum*, (verbal) noun *d̥r̥ś-ṭi-h*, etc. But in Alb. *dritë* 'light' from **dr̥k-tā* the velar was not palatalized since it had been in front of a stop and also since there had not been another verbal form which could influence it. The following words can be explained in a similar way:

Lith. *pēkus*, OPruss. *pecku* 'cattle' with the velar regularly preserved before *u*, but Skt. *paśu-h* m., *pāśu*, *paśú* n., Av. *pasu-* m. with a unified sibilant following such forms as dat. sing. *pasāve* from **pekew-ey*, gen. sing. *paśu-āh* from **pekew-es*, voc. sing. *paśo* from **pekew*, nom. pl. *pasavaḥ* from **pekew-es*;

Lith. *smakrā* 'chin', Alb. *mjekrë* 'chin, beard' from **smokrā*, but Skt. *śmaśru-* with unified *-ś-* following such forms as (Ved.) dat. sing. *-ave* from *-ew-ey*;

OBG *svekry* 'mother-in-law' from *swekrū-s* f., *svekrū* 'father-in-law' from **swekro-s* with a velar, in accordance with the rule, preserved before *-rū-* and *-ro-*, but Skt. *śvaśura-h*, Av. *xvasura-*, Lith. *šėšuras* with a unified sibilant after the supposed form **swekwer-* or nom. sing. **swekru-*, dat. **swekrew-ey*, etc.;

OBG *kamy*, Lith. *akmuō* 'stone' from **akmō(n)* with the velar regularly preserved, but Skt. *aśman-* 'stone, sky', Lith. *āšmen-s* gen., Lett. *asmens* 'edge' from **akmen-*; Skt. nom. *aśmā*, Lith. *aśmuō* with a unified sibilant;

Skt. *hāvate*, OBG *zovetū* from **ghew-eti*, but Skt. *huvand-*, OBG *zūvanū* from **ghuw-* have a unified *h* or *z*;

OBG *gosļ*, Lith. *žąsis*, OPruss. *sansy* 'goose', Skt. *haṁsá-h* 'gander; swan', *haṁsī*, 'goose', Av. *zāw*, Gr. *χίψ*, Dor. *χάψ*, OHG *gans* 'goose' are derived from IE **ghans-s* (an onomatopoeic word), gen. **ghys-és* > Balto-Slav. nom. **gans*, gen. **žinses*. The OBG word is derived from forms such as the nominative, while the Lithuanian appears with a unified sibilant after forms such as gen. sing. The same applies for Old Prussian, Sanskrit, and Avestan.

The processes of palatalization and unification of the split root or stem took place in different and very remote periods: some forms disappeared but despite this our theory provides the possibility for all these cases to be explained.

2.4. Ungrounded Objections

Kuryłowicz opposes the explanation based on the unification of the split root or stem. He is of the opinion that a basic difficulty is the presence of palatal consonants (*k'*, *g'*, *g'^h*) before *o*, *u*, *ɣ*, *ɮ*, *ʋ*, *ɹ* in roots or words "where they could not have penetrated by morphological means dur-

ing the period of dialectal differentiation" (1956:357). The author gives 15 examples which, according to him, should be considered the most sound arguments against the theory of palatalization. Kuryłowicz' objections are in fact incorrect. They are due to a lack of understanding of the processes of palatalization and unification, to an underestimation of the numerous correspondences with velars and sibilants in the so-called *satəm* languages, and to some erroneous reconstructions of forms. Detailed investigation of these examples is especially advantageous and instructive: it shows that according to our thesis even the most difficult cases can be explained.

2.4.1. Palatalization in the Clusters *kle*, *kwe*, etc.

In the majority of the words Kuryłowicz adduces there is an alternation of velars and sibilants. Contrary to Kuryłowicz' views (1956: 358 and 364, footnote 9) it has already been proved that these cases are not rare (see above). Kuryłowicz has ignored this because it contradicts his hypothesis. It is strange to deny the alternation of velars and sibilants in words which are derived from the roots **kley-*, **klew-*, and **kweyt-*, when they are given in all etymological dictionaries: to deny the facts is inept, facts have to be explained. These alternations are the after-effect of the palatalization of the velars in the clusters **kley-*, **kli-*, **klew-*, **kweyt-*, **kwit-*, while in the clusters **kloy-*, **klow-*, **klu-*, **kwoyt-* the palatalization, as was already pointed out, did not take place. Examples:

**kley-*: Skt. *śrayati*, *śritā-* part., Av. *sray-*, *srita-*, Lith. *šliejū*, *šliėti*, *šlite*, *šlītis*, Lett. *slīta* have a sibilant since they are derived from **kley-* and **kli-*, while in OBG *klēīl* the velar is preserved since it comes from **kloy-ti-s*. This correspondence is certain, see Pokorny 1951-69: 552, 602.

**klew-*: Skt. *śravas-* = Av. *sraвах-* 'glory' = OBG *slovo* 'word', Skt. *śroṣati* 'hears', OBG *sluṣati* 'to hear', etc., have a sibilant because they are derived from **klew-*, while in Lith. *klausau*, *klausyti* 'to hear', Alb. *quhem* 'I am called, named' the velar, in accordance with the rule, is preserved since the latter come from **klow-* and **klu-*. These correspondences are certain, see Pokorny 1951-69: 605-606.

**kweyt-*, as well as **kwey-s-* and **kwey-d-* 'to light; light, white' are derivations from **kew-*, see Pokorny 1951-69: 628, 594-595. There are words with velars and with sibilants from this root, e. g., Lith. *švitū*, *švitėti* 'to glisten', OBG *svltėti* 'to shine', *svitāti* 'to become light', *svētū* 'light', but *cvētū* 'color, flower', Lett. *kvitu*, *kvītēt* 'to glisten', OBG *cvltq*, *cvist*; from **kwit-* or **kwoyto-s*. Forms of the type Lith. *švitū*, etc. from **kwit-* or **kweyt-* regularly have a sibilant; in forms of the type OBG *cvētū* from **kwoyto-s* *k* has been preserved in the cluster **kwoy-*. OBG *svētū* from **kwoyto-s* and Lett. *kvitu* are unified forms.

**ghwēr-*: Lith. *žvėris*, OBG *zvėrī* 'beast' are regular because the velar was palatalized in the cluster *ghwe* (see above). These words are derived from the root **ghew-*: **ghew-* as a derivative of **ghē-*, **ghā-* 'to gape', see OBG *zējō* 'to gape' from **ghēyō*, Russ. *zeo* 'pharynx' from **ghēwo-s*, *zevat* from **ghē-w-*, Lith. *žiotis*, *žiotys* pl. 'abyss; mouth'.

2.4.2. Palatalization before a Vowel Which Came from IE *u*, *m*

**dekṃ* 'ten': Skt. *daśa*, Av. *dasa*, Alb. *dhjetë*, Arm. *tasn*, Lith. *dėšim-tis*, OBG *dese-tī*;

**kṃtóm* 'hundred': Skt. *śatām*, Av. *satəm*, Lith. *šimtas*, OBG *sūto*.

The IE syllabic nasals developed into vowels or clusters of vowel + nasal during some very remote period, in any case much earlier than the syllabic liquids. There are sound reasons for supposing that in Indo-Iranian and in Armenian the syllabic nasals first shifted into front vowels (nazalized, probably ϵ),²³ as in Balto-Slavic. The shift took place before the palatalization of the velars. Thus this is a regular case of palatalization. In Alb. *dhjetë* 'ten', derived from **dék(a)t-* ($\epsilon > a$), there was no palatalization since at the time that this process was taking place, *k* was already before *t* or before *a* from *m* and later it was regularly assimilated into *tt* $> t$.

2.4.3. Unified Forms

The most difficult cases concerning our conception are IE **oktō(w)* 'eight' and **ekwo-s* 'horse'.

**ekwo-s* 'horse': palatalization took place in the forms **ekw-(i)yo-s* $>$ Skt. *áśw(i)ya-* = Av. *aspya-* = Gr. *ἵππος*, Skt. *áśvī* m. (*n*-stem) 'rich in horses, charioteer', OPruss. *aswinan* n. 'mare's milk', Lith. *ásvienis* m. 'stallion', etc. Therefore, the velar was regularly palatalized in the combinations *kwi*, *kwy*. The sibilant in forms such as Skt. *áśva-h*, etc., is due to the unification of the split stem. On the other hand, proto-Indic *assu-sanni* 'connoisseur of horses' (Gr. *ἵππο-νόμος*) = Skt. *áśva-śani-* 'gaining horses' (see section 10.4), Anglo-Saxon *ehu-skalk* 'groom', Lith. *ášu-tas* 'horse's hair' show that **ekwo-s* comes from an older **eku-s* (*u*-stem).²⁴ In this case the explanation of the sibilant is the same as in Skt. *paśu-* 'cattle' (see section 2.5).

**oktō(w)* 'eight': Skt. *aṣṭā(u)*, Av. *ašta*, Arm. *utē*, Alb. *tetë*, Lith. *aštuoni*, OBG *osmī*.

The alternation of velar and sibilant is also found in **oktō(w)* and **dekṃ*, cf. Alb. *tëtë* from **atē-tē* $<$ **oktō-ti-* and *dhjetë* from **dēka-t-* with the assimilation *kt* $>$ *tt* $>$ *t*, cf. *natë* 'night' from **nokti-s*; Arm. *utē* is probably derived from **oktō*. Kurylowicz has ignored the facts in Albanian since they cannot be explained by his hypothesis. He writes: "To explain the palatality of *k'* in **ok'tou* by a palatal vowel which had disappeared (**ok'etōu*) is the same... as to suppose the dialectal origin of *k'*, *g'*, *g'h*." (p. 358). This objection ignores the ancient Vedic form *aṣīti-* 'eighty' in which *ś* is regular before *i*: it cannot be explained as a dissimilation from **aṣṭīti-* since this dissimilation should give **aṣīti-* and not *aṣīti-*.²⁵ The dissimilation *t-t* $>$ *0-t* had taken place before the first palatalization: for this reason *k* was palatalized and assibilized before *i*.²⁶ This form influenced *aṣṭā(u)*. However, Alb. *tetë* (and Arm. *utē*) regularly comes from **oktō t-* without palatalization of the velar.

²³ Cf. IE **kmtom* $>$ L. *centum* $>$ Fr. *cent* (= *sā*); IE **dekṃ(ti-s)* $>$ Balto-Slav. **dešim(tis)* = OBG *desetl* $>$ Czech *desat'*; cf. also IE *ṇ* $>$ common Slav., OBG ϵ $>$ High Laus. *ā* $>$ *a*, Russ. *'a*.

²⁴ Concerning *-u-*: *-wo-* cf. Gr. *πέλεκυς* and *πέλεκκος* ($\kappa F > \mu$), *λάκκος* and L. *lacus*, *lōs* and Skt. *iṣu-*, etc., see section 11.4.1.

²⁵ Cf. Debrunner and Wackernagel 1930: 370: "setzt *aṣīti-* einen von *aṣṭāu* 'acht' verschiedenen Stamm voraus, worin *aṣ-* dem auf ig. *ok'* beruhenden Anfangsstück von *aṣṭau*... entspricht. Gerade deshalb muss *aṣīti-* in die Grundsprache zurückreichen, natürlich mit der Bedeutung 'Achttheit'... Nach Brugmann... ist das *i* vielleicht dualisch"; Burrow 1955: 261: "*aṣīti-*... an independent formation from the root... obviously ancient."

²⁶ Cf. Skt. *tisrah* 'three' from **t(r)i-s(o)r-es*, OIr. *téoir* f. 'three' from **t(r)i-sorās*. Av. *aštāiti-* has *aštā-* after *ašta* = Skt. *aṣṭā* 'eight'.

2.4.4. The Cluster *ks*

Among the words quoted by Kuryłowicz there is a special group which has the consonant cluster *ks*. The original cluster *ks* is preserved in Indo-Iranian. This is evident from Sanskrit: *akṣa-ḥ* 'axis' from **aks-*, *dakṣina-ḥ* 'right' from **deks-ino-s*, *vakṣi* 'you want' but *vaṣmi* 'I want', *ādikṣi* 1st pers. sing. med. sigm. aor., but *diśati* 'shows', *ādrāk*, *āsrak*, *prā-ṇak* 3rd pers. sing. aor. (IE *-kst*) from *dṛś-* 'to see', *syj-* (Av. *harəz-*) 'to leave, to pour', *naś-* 'to attain', *dik* 'direction, quarter' from **dik-s* but loc. *diśi*, *ṛt-vik* 'priest' (*-k* from *-ks*), but *yajate* 'worships' = Av. *yazaitē*, etc. In Sanskrit the dissimilatory influence of a sibilant which follows prevented the unification of the split root or stem. For this reason unified forms are very rare in such cases: *naṭ*, *ā-naṭ*, but *pra-ṇak*, under the influence of the form *naś-* (pres. *naśati* from **neketi*) and following the pattern *adveṭ* 2nd and 3rd pers. sing. sigm. aor. from *diviṣ-* 'to hate',²⁷ *a-vaṭ*, *ā-prāṭ* 2nd and 3rd pers. sing. aor. from *vah-* 'to drive' and *praś-* 'to ask, to question', etc.

The Indo-Iranian cluster *ks* had shifted into Iranian *xš*, which started to be substituted by the unified form *š* (from *sš* and *zš*) at a very early period (in pre-literary times) of the history of Avestan and Old Persian. However the cluster *xš*, independent of the unification of the split root, later began (in some dialects) to be simplified into *š*. Nonetheless Avestan and Old Persian have preserved many examples from the oldest stage of their development:

Gāthān Av. *ən-āxštā* 'has achieved' 3rd pers. sing. med. sigm. aor. from **nekst-*, cf. Skt. *pra-ṇak*, but Av. *-nasaiti* = Skt. *naśati* from **neketi*; here we have an alternation of velar and sibilant.

Av. *vāxša-* from **wēgh-s-o-* together with the unified form *vāša-* 'cart', cf. Av. *vāzah-* = Skt. *vahas-*, *vāhas-* 'driving' from **weghes-* and **wēghes-*, Av. *vazaiti* = Skt. *vahati* 'drives' from **wēgheti*. We have an alternation of velar and sibilant here also.

Av. *pouru-spaxšti-* a derivative of **spek-*, cf. Skt. *spāśati*, *pāśyati* 'sees', Av. *spa-syeiti* 'sees, watches': alternation of velar and sibilant in this case as well.

Unified forms prevail in Avestan and Old Persian. Unification was also achieved in Balto-Slavic as early as the pre-literary period; compare, for instance, OBG *nēsū* 'I carried' instead of **nēxū* from **nēk-s-ŋi* under the influence of the unified root *nes-* in such forms as OBG *nesetū* 'carries' from **nek-eti*.

Let us analyze the example adduced by Kuryłowicz from our point of view.

**ṛkso-s* (?) 'bear': Skt. *ṛkṣa-ḥ*, Late Av. *araša-*, Ossetan *ars*, Arm. *arj* (under the influence of *arjn* 'dark brown'), Alb. *ari*, Gr. *ἄρκος*, *ἄρκτος*, L. *ursus*, etc. The oldest Iranian form is recorded in the Avestan proper name *araxšo* = Skt. *ṛkṣa-ḥ* 'bear': proper names often preserve old forms. There is alternation of velar and sibilant in this case as well. The development was as follows: Indo-Iranian *ks* > Iranian *xš* > Av., OPers. *xš*, with a strong tendency towards simplification into *š*. The PIE form is **h₂r₁tko-s* and the verb **h₂retketi*, cf. Hitt. *hariaggas* 'beast of prey, bear (?)', see section. 1.3.2.²⁸

**ksey-* (?): Skt. *kṣēti*, *kṣiyati*, Av. *šāiti* 'dwells', Skt. *kṣiti-* 'abode' = Av. *šiti-* 'head quarters, village', Skt. *kṣētra-* 'landed property, soil' = Av. *šōiḥra-*, Arm. *šen*, gen. *šin*

²⁷ *-t* (= *t'*, *č*) as an older stage of development: *k* > *k'* > *t'* > *č'* > *š*.

²⁸ Cf. Skt. *raṁśas* n. 'destruction', *ṛkṣi*, *ṛkṣi-ku* 'she-bear', Av. *rašaḥ-* 'harm', *rašayeiti* 'harms',

'village'. In Avestan an older form is recorded, *aiwi-xšoiḥne*, which appears in the OPers. proper noun *Δαίτις* (Aesch.) from **divai-xšī-*, cf. Skt. *divi-kṣitā*. Thus in Iranian there was also an older form with *xš* which later shifted into *š*. These words are derived from **theyeti*, see section 1.3.2.

**deks-*: the adjectives Skt. *dākṣa-h* 'able, agile', *dakṣina-h* 'right', Av. *dašīna-*, Lith. *dēšinas*, OBG *des(i)nū*, Gr. *δεξιός* 'right, agile', Alb. *djathhtë* 'right' are derived from the substantive IE **dek-es-*,²⁹ cf. Skt. *daśas-yāti* 'serves, obliges, favors' from **dek-es-*, L. *decus*, *-oris* n. 'dignity, propriety' from **dekes-*. The original forms Balt. **dešes-*, **deš-e(ti)* and Slav. **dešes-* and **deš-etī* have had a unifying effect on the words above. The oldest form is Av. *daxš-* 'teach', cf. Skt. *dakṣa-* 'gifted, able', *dākṣati* 'acts to the satisfaction of', *dakṣate* 'is able'.

**teks-* (?): Skt. *takṣati* 'fashions, carpenters, creates, cuts' = Av. *tašaiti* 'creates', Lith. *tašaũ*, *-ỹti* 'to cut', OBG *tēšō*, *tesati* 'to cut'. The oldest form is preserved in Av. *taxš-* 'to create' together with *taš-*. These words are derived from **tetketi*, see section 1.3.2; Gr. *τέκτων* 'builder, master' is derived from **tētk-ō(n)*, cf. Gr. *τίτω* 'to give birth' from **τιτω*, aor. inf. *τεκ-εῖν*.

2.4.5. Erroneously Reconstructed Forms

Skt. *ahám*, Av. *azəm*, OPers. *adam*, Arm. *es*, Gr. *ἐγώ*, L. *ego*, Goth. *ik*, Lith. *aš*, OLith. *eš*, OPruss. *es*, *as*, OBG *jazū*, *azū*, *azī*, Hitt. *uk*, *ug(g)a*, Toch. *ñuk* 'I'. The initial form of this pronoun was formerly considered to be **eg'(h)ō(m)*. This is the Neogrammarian reconstruction: it cannot explain the *h* in Sanskrit; it does not give a satisfactory explanation for the short vowel *a* in Sanskrit as compared to the long vowel *ō* in Greek and does not elucidate the origin of this pronoun. The original forms of the pronoun are PIE **egéx* and **eg(e)x-ém*, an agglutination from two or three deictic particles (cf. Gr. *ἐγώ γε* = *ἐγω-γε*, *σύ γε*, L. *id-em* = Skt. *id-ám* 'id', Skt. *tū-ám* 'tu', *māhy-ám* 'mihi', etc.). PIE **egéx* > Gr. *ἐγώ*, L. *egō*, etc. (*ex* > *ō*); PIE **egéx(e)m* > Hom. Lesb. Dor. *ἐγών*, Beoth. *íwón*, L. *egom(-et)*; PIE **eg(e)-xém* > Skt. *ahám*, Av. *azəm*; PIE **ég(e)xm* > Balto-Slav. **éžim* > Slav. **ězi* > **jāzi*. Therefore Kuryłowicz's objection is groundless: the original form of the pronoun had been erroneously reconstructed.

**sweks* 'six': the forms of the numeral 'six' are quite different in the IE languages: **kswes* (Av. *xšvaš*), **kses* (Mid. Ind. *cha*, Gr. Knidos *ξεσ-*, OBG *šes-tī*), **kes-* or **sek(i)* (Lith. *šeši*; *š-* *s* or *s-* *š* > *š-* *š*), **weks* (Gr. dial. *Ἑξ*), **seks* (L. *sex*, Goth. *saihs*), **uk-* or **uks* (OLith. *ušios*, OPruss. *uschts*), etc. The original form of Av. *xšvaš* was **kswes*, with the progressive assimilation *š-s* > *š-š*. Skt. *ṣaṣ-* (= *ṣat-*) was an allegro form from **(k)ṣaṣ* with assimilation from **(k)ṣas* < IE **kses*, cf. Mid. Ind. *cha* 'six' from **kses*.

2.5. Special Cases

The processes of the palatalization (and assibilation) and unification of the split root (or stem) were very complex and varied in the different IE languages. Furthermore, they took place in different ways and at different

²⁹ See Pokorny 1951-69: 189-210.

periods of time in the various language groups. Here we shall deal with only a few cases.

The cluster *sk* has a specific position with respect to palatalization and assibilation: the preceding *s* usually prevents the assibilation of the velar. Thus, for instance, in Lettish *k'* shifts into *c* (= *ts*), but *k'* in the cluster *sk'* remains unchanged. Moreover, it is well known that in IE roots with initial clusters of *s* + stop the *s* is movable, cf. Gr. *στέγη* = *τέγη*. An instance of this is the correspondence Lith. *skėrdžius* or *keřdžius* 'herdsman', OBG *črėda* 'herd', and Skt. *śārdha-h* m., *śārdhas-* n. 'herd, crowd'. The original root was **skerdh-*. During the first IE palatalization the Balto-Slavic words had initial *sk*, as is seen from Lith. *skėrdžius*: for this reason *k* in Balto-Slav. **skerd-* was not assibilated. Later, during the interval between the first and the second IE palatalization, initial *s* disappeared in Proto-Slavic: the root had already become **kerd-* and for this reason during the period of the second palatalization (= the first Slavic palatalization) *k* developed regularly into *č*: Slav. **kerdā* > **čerdā* > OBG *črėda*. In Indo-Iranian the movable initial *s* had already disappeared before the first palatalization: consequently, **kerdh-* regularly shifted into **šerdh* > Skt. *śārdha-h*, *śārdhas-*. Therefore, in special cases the IE velars can remain unaffected during the first palatalization but then they can change according to the laws of the second palatalization.

A similar example is found in Lith. *skiedžu*, *skiesti* 'to divide', *skiedà*, *skiedrà*, *skiedarà* 'splinter' from **skeyd-*, OPruss. *skistan* acc. 'clean', OBG *čistū* from **(s)keyd-to-*, Skt. *chinatti*, *chindati* 'cuts off, splits, pierces', *chedayati* caus., *chidrā-* 'pierced'; n. hole' from **skid-*, Av. *saēd-* 'to splinter' from **(s)keyd-*, *sid(a)ra-* n. 'slit, chink, hole', *a-sita-* 'unbroken' from **(s)kid-*; it should be taken into consideration that under palatalization *sk* shifted into *ch* in Sanskrit and into *š* in Avestan.

The case is the same in Slav. *cěpiti* 'to split', Russ. dial. *cepinka*, Bulg. *cepja* 'I split', *cepenica* 'piece of a split log', *cep* from **koyp-*, Skt. *śepa-h* 'tail, penis' from **keypo-s* = L. *cippus* 'pole' from **keypo-s*, Prakrit *cheppa-* from **skeypo-s*, Gr. *σχοῖνος* 'beam'.

A special instance is Lith. *gėrvė* and Slav. *žeravī*, which correspond to Gr. *γέρας* and L. *grūs* 'crane'. The Greek word shows that we have an original velar (not a labiovelar) here: nevertheless Lith. *gėrvė* and Slav. *žeravī* have *g* and *ž* before *e*, which is the evolution of an IE labiovelar. The reason is that during the first IE palatalization the velar remained unchanged in the Balto-Slavic word since at that time this word clearly had an onomatopoeic character.³⁰ During the second palatalization (= first Slavic palatalization) the onomatopoeic character had already faded and the velar underwent a regular palatalization and assibilation into *ž*.

Another special case is Skt. *roka-h* m. 'light', *rūkmant-*, *rukṣa-* 'brilliant', *rócate* 'shines, is bright', *rocáyati* caus., *lókate* 'sees, perceives', *rocand-* 'light', *rūci-h* f. 'light, brilliance', *rocas-* 'light' together with *rūśant-* 'bright, light, brilliant', Khotansacian *rusana-* 'bright, glittering', Lith. *laukas* 'pale', OBG *luča*, *luči* 'ray' together with *lysū*, Russ. *lysyj* 'bald', Lith. *lūšis*, Lett. *lūsis*, OPruss. *luysis*, OBG *rysī* (with *r* instead of *l* influenced by *rūvati*

³⁰ Cf. André 1966:151: "Le cri de l'oiseau est *krrou* ou *kru* avec un *kr r-r-* guttural plus paisible..." On the lack of palatalization and assibilation cf. Skt. *kiki-h* 'magpie' instead of **cicīh*, see Wackernagel 1896:143; Brugmann 1897-1916: 2, 576.

'to tear'), etc. The words mentioned above are derived from the root **lew̥k-*. In Skt. *roka-ḥ* = Lith. *laūkas* from **lowko-s* and Skt. *rūkmant-*, *rukṣa-*, the original velar is regularly preserved; in Skt. *rūśant-* from **luk-ent-*, Lith. *lūšis* = Lett. *lūsis-*, OPruss. *lūsis* = OBG *rysi* from **lūk-i-s* the velar was regularly palatalized and assibilated. The Slavic adjective *lysŭ* is obviously a transformation of **lysŭ* < IE **lūk-i-s*; Skt. *lókate*, *locate*, *rócate*, *rocáyati*, *rocáná-*, etc., are secondary (denominative) derivations from the stem of the substantive *roka-ḥ* < IE **lowko-s*, like It. *borgese* (instead of **borgese*) from *borgo*.

These examples show that in certain specific cases the original velars change according to the second palatalization so that the correspondences *k-c-ś* from IE *k* appear in Sanskrit. In certain specific cases, where delabialization had taken place at a very early period, primitive labiovelars could also be affected by the first palatalization. The following example from the history of Latin clearly illustrates this phenomenon: L. *sequor* 'follow' from **sekʷ-*, but *socius* (Late L. *ci* - *tsi*) from **sokʷyo-s*.

2.6. The Erroneousness of the *centum-satəm* Theory

The changes in the gutturals are the basis of the old theory of the classification of the IE languages into two dialectal groups, *centum* and *satəm*. Before Hittite and Tocharian were known, the main criterion of this theory was the geographical distribution of the IE language groups: Western = *centum* and Eastern = *satəm*. With the discovery of Hittite and the two Tocharian languages, which were spoken by a population within the region of the so-called *satəm* languages, this theory lost one of its soundest arguments. Now the majority of linguists refute the theory of the classification of the IE languages into *centum* and *satəm*.³¹ The contemporary linguists who have accepted it are doing it because of tradition.

If one considers the thesis that the sibilants (or affricates) in the so-called *satəm* languages are the result of palatalizational processes to be correct, then there is no need to accept the simultaneity of these processes, since palatalization is a very frequent phonetic phenomenon which can appear independently at different places and at different times and can lead to almost the same results. The second palatalization had almost the same results, cf. Skt. *c* = Slav. *č* = Lett. *c* = Toch. *ç*: Skt. *catvārah*, Slav. *četyre*, 'four', Lett. *ceturtais* 'fourth', Toch. A *çtwar* 'four'. But these identical changes took place independently of each other and at different times: in Lettish it took place in 13th century A. D., in Slavic it took place during the end of the 1st millennium B. C. or the beginning of the 1st millennium A. D., while in Indo-Iranian it took place during the 3rd millennium B. C. Formerly many linguists thought that the change *kʷ* > *č* in Indo-Iranian, *kʷ* > *č* in Slavic, *kʷ* > *τ* in Greek were genetically related.³² But after the decipherment

³¹ Debrunner 1921:24; 1926:510; Hermann 1922:306; Feist 1926:64; Georgiev 1932; 1937:104-106; Meillet 1933:203; 1936b:225-226; Schwyzler 1934-39:54; Pisani 1933:5-6; Güntert 1934:182; Specht 1934:103; Benveniste 1936:229; Brandenstein 1936a:16; Karstien 1936:300-301; Schrijnen 1936:136; Meillet and Benveniste 1937:91-92; Machek 1939:186-187; E. Georgiev 1941:3-4; Guchmann 1954:335-336; Desnickaja 1955:234-235; Gornung 1956:34-37; Rosenkranz 1959:16; etc.

³² See Schwyzler 1934-39:295-296.

of the Mycenaean Greek dialect, in which the original labiovelars are preserved (*qe, qi, qa, qo* = $\kappa^w\epsilon, \gamma^w\epsilon, \chi^w\epsilon, \kappa^w\iota$, etc.), it became clear that the shift $k^we > \tau\epsilon$ took place between the 12th and the 9th centuries B. C., entirely independent of similar processes in Indo-Iranian and Slavic. Thus the processes which led to the changes of the original velars in Indo-Iranian, in Albanian (*s, th, z, dh, d*), Armenian (*s, c, z, j*), and Balto-Slavic developed independently of each other and at different periods.

The theory of the classification of the IE languages into *centum* and *satəm* groups is an impediment to the correct explanation of the relationships between these languages and especially an impediment to explaining the obviously close affinity between Balto-Slavic and Germanic. The classification of the IE languages was based on only one phonematic fact: no matter how great the importance of this fact, the classification cannot be well grounded if it is not based on more facts, and furthermore these facts should come from different fields of linguistic structure.³³

Therefore the terms *centum* and *satəm* coincide with the terms "non-palatalized" and "palatalized". The terms *centum* and *satəm* do not unite language groups which are closely related to each other: they only point out a very frequent phonetic phenomenon which takes place at different times and completely independently, which still functions in all the IE languages, and which is commonly called **palatalization**. The terms *centum* and *satəm* cropped up due to erroneous insufficient knowledge about the phonematic phenomena in the IE languages. Formerly these terms were based on the geographical distribution of the IE languages but after the discovery of Hittite and Tocharian this theory turned out to be groundless. These terms, the result of an erroneous conception, should be completely eliminated from linguistic terminology. Thus, taking all the above facts into consideration, we come to the following conclusions:

(1) In common IE, at least during the period immediately preceding the disintegration, there were two series of gutturals: velars (*k*) and labiovelars ($k^w = k$ with a bilabial appendix or labialized velars). This conception is today widely agreed (cf. Miller 1976:47).

(2) In some IE languages the processes of palatalization and assibilation of the velars mainly before *e, i, y* had already started in the most remote times; these processes took place at different times, in different ways, and entirely independently of each other in the different language branches.

(3) The split of the root or the stem due to palatalization and assibilation was usually eliminated in the course of a long period of time due to the operation of the morphological law of the unification of the split root (neutralization of the allomorphs).

Thus in IE two series of gutturals existed: labiovelars (A) and velars (B), within which the correlation $K^w - K$ existed. In the IE languages which preserved the velars this correlation was also preserved, i. e., in these languages the labiovelars did not undergo changes. This is the case with

³³ See Cornung 1956:34: "the theory of the initial integration of the common IE language into *centum* and *satəm* groups, a theory developed towards the end of the 19th century and firmly accepted in practice... is groundless. This theory did great harm to science and for several decades prevented the correct understanding of the disintegration of the common language into dialects."

Table 1

Languages in Which the Labiovelars Were Preserved

Language	A	B
Hittite	$k^w (=kw)$	k
Greek (Mycenaean)	$k^w (=q)$	k
Latin	$k^w (=qu)$	$k (=c)$
Celtic (Ogamic)	k^w	$k (=c)$
Germanic (Gothic)	h^w	h

Table 2

Languages in Which the Labiovelars Changed into Velars

Language	A	B
Indo-Iranian	k	$\acute{s} (s)$
Balto-Slavic	k	$\acute{s} (s)$
Albanian	k	s, \acute{p}
Armenian	k^c	s
Tocharian	k	\acute{s}
French	$k (=c, qu)$	s (written c)

the languages in which no palatalization took place (the so-called *centum* group, see Table 1).

But in the IE languages in which k shifted into a sibilant (or affricate), the labiovelars lost their correlation since palatalization (and assibilation) of k before e, i, y and the unification of the spilt root led to a considerable decrease in the number of words in which the original velar was preserved. Thus the second member of the correlation (B) almost completely disappeared and the unstable labiovelars, without opposition, turned into velars (see Table 2).

Therefore the labiovelars are preserved in the IE languages in which the velars are preserved, i. e., where the labiovelars are in correlation and opposition with the velars. However, in the IE languages in which, due to palatalization and unification of the root, the velars shifted into sibilants (or affricates), the labiovelars turned into velars since the labial appendix (of the labialized velar) lost its quality of being a distinguishing marker.

These conclusions throw a new light on the problem of the position of Tocharian among the language groups within the IE family. Tocharian was prematurely classified in the *centum* group because it preserved k in Toch. A *känt*, B *känte* 'hundred', Toch. A *okät*, B *okt* 'eight' and Toch. A *cäk*, B *cak* 'ten'. But Tocharian is very closely related to Balto-Slavic, i. e., it has features in common with the so-called *satəm* languages.

Indeed there are no sound reasons for classifying Tocharian in the *centum* group since the IE gutturals in Tocharian appear in the same form as in Balto-Slavic and Iranian. In other words, the velars in Tocharian are preserved or have changed into sibilants due to palatalization and assibilation, while the labiovelars have shifted into velars (due to delabialization) or into sibilants (from older affricates), see sections 9.2.-4.

Chapter 3

The Most Ancient Languages in the Southern Part of the Balkan Peninsula and Their Importance for Comparative-Historical Linguistics

During the last thirty years IE linguistics has made marked achievements in the investigation of the languages of the Balkan Peninsula.¹ Research is moving in several directions: decipherment and interpretation of the Mycenaean texts, investigation of the pre-Greek IE language on the basis of the Greek vocabulary and onomastics of the Aegean region, and careful investigation of the remnants of the Thracian, Dacian, Illyrian, Macedonian, and Phrygian languages.

3.1. The Greek Mycenaean Dialect and Its Importance for Comparative Historical Linguistics

3.1.1. New Data for Comparative-Historical Linguistics

The decipherment of the texts in Linear B was a considerable achievement for IE linguistics. The language in which these texts are written was used during the 14th century B. C. up to the end of the Mycenaean period (12th/11th centuries B. C.).² At the present time we have about 3000 inscriptions written in Linear B from Knossos³, about 1300 from Pylos⁴, about one hundred from Mycenae⁵, and also various other inscriptions from Thebes⁶, Orchomenos, Eleusis, Tiryns.

Almost all of these texts are written on clay tablets; only an insignificant number are written on various objects, mainly vases. However, there are reasons for maintaining that this kind of writing was widely used, but

¹ See Untermann 1955:115: "... discoveries in recent years, such as the uncovering of a pre-Greek Indo-European language by V. Georgiev... and the decipherment of the Cretan-Minoan script by E. Sittig and M. Ventris, have put everything in motion again."

² See Palmer 1965:173-175; 1969; Palmer and Boardman 1966.

³ Bennett, Chadwick, and Ventris 1959; Chadwick, Killen, and Olivier 1971.

⁴ Gallavotti and Sacconi 1963; Bennett and Olivier 1973.

⁵ Bennett 1958a; Sacconi 1974.

⁶ Spyropoulos and Chadwick 1975; Godart and Sacconi 1978.

that papyrus was the writing material most often used and that the papyrus has not been preserved.⁷

During 1948-49 it was established that the final consonants were missing in these inscriptions. This fact, as well as the establishment of the phonetic value of about twenty syllabic signs, made it possible to establish certain elements of the morphology (nom., dat., acc., sing. m. and n. -o; nom., dat., acc. fem. -a; nom., acc., pl. f. and n. -a; dat. sing. -e in the consonant stems, etc.) and also made it possible to interpret certain words, as for instance *polo* = *πόλω*.⁸ Thus I came to the conclusion that the language of these inscriptions was Greek or closely related to Greek.⁹ There were, however, a large number of errors in my work.

The final decipherment was done in 1952-53 by the Englishman Ventris, in collaboration with his compatriot Chadwick. Having a great quantity of inscriptions at their disposal, which they could partly check with the originals, they established the phonetic value of almost all the signs and this enabled them to read and interpret the texts. They discovered that the language of the inscriptions in Linear B was an old Greek dialect which they called "Achaean".¹⁰

The Mycenaean writing type B is syllabic: it consists of about 80 signs which mark the vowels (*a, e, i, o, u*) and syllables formed from consonants and vowels (*ka, ke, ki, ko, ku; ta, te, ti, to, tu*, etc.); furthermore there are signs marking the clusters *ai, dwe, dwo, nwa*, and *pte*. Together with the syllabic signs about 150 ideograms (pictograms) are used.

Ventris' decipherment of the Mycenaean texts is an epoch-making achievement and it attracted considerable attention. Within a short period many publications on these inscriptions appeared. It is now estimated that 70-80 per cent of the words of the Mycenaean texts have been interpreted. Due to the peculiarities of the writing (or of the dialect) there are hesitations as to the interpretation of about 15-20 per cent of the words: thus, for instance, the personal name *parato* could be interpreted as *Πάριον* or as *Πάριδος*. Approximately 5 per cent of the words have not yet been interpreted.

In spite of the widespread opinion that the Mycenaean tablets were written in some non-Indo-European language, it has been proved that what we are dealing with is a specific ancient Greek dialect.

The importance of the Mycenaean texts for IE linguistics is enormous. Most significant is the fact that these texts have confirmed a number of hypotheses based on the comparative-historical method, as the following examples show.

The supposition that the Greek word *αἰχμή* 'point, spear' was derived from *aiksmā* was confirmed by the presence of this form in one of the Pylos inscriptions: *aikasama* = *αἰξμᾶ*.

⁷ Matz 1956: 74.

⁸ See Sittig 1956a: "Der Gedanke der Anknüpfung an die kyprische Silbenschrift... war richtig und führte G(eorgiev) zu einem richtigen Teilergebnis... Richtig gedeutet sind von G. 11.87 % der 9000 Gesamtzeichen, 18.07 % nahezu... also zusammengekommen 29.93 % richtig oder nahezu richtig, dies Ergebnis zu einer Zeit, als erst ein kleiner Bruchteil der gefundenen Inschriften recht, meist schlecht veröffentlicht waren." See also El'nikij 1959:316.

⁹ Georgiev 1948-49.

¹⁰ The first publication was Ventris and Chadwick 1953. The most important work is Ventris and Chadwick 1956. See also Chadwick 1958a.

On the basis of comparison with other IE languages it had been established that the forms of the oblique cases, *énos, éni*, etc., of the Greek numeral *éīs, éñ* 'one', have *ν* instead of the ancient *μ*, i. e. *énos, éni* instead of *émós, émeí*, etc., due to the influence of the nominative. This form, which previously was only hypothetical, was found in one of the inscriptions from Pylos in which it appears in dat. *eme* = *éme(i)*.

The supposition that *ἀροτο-κόπος* m. and f. 'baker' was derived from *ἀροτο-πόκωος* was confirmed by several inscriptions from Pylos in which the form *atopoqo* = *ἀ(ρ)τοπόκωο(ς)* was found together with the word *sitopoqo* = *αιτοπόκωο(ς)* 'baker'.

Brugmann's supposition that Att. *τῆτες*, Ion. *σῆτες*, Dor. *σᾶτες* 'this year' was derived from **kyā-wetes* was confirmed by the word *zawete* (*za-* = *k'a-*) in the Pylos inscription Ma 225.2.

On the basis of the words *ὀπι-θε(ν)*, *ὀπισθε(ν)* 'behind, after', *ὀπισ[θο]-θέναο* II. 'the back of the hand', Ep. *ὀπίσ(σ)ω*, Ion., Att. *ὀπίσω* 'at the back, behind, after', *ὀπώρα* 'late summer, autumn', *ὀψέ, ὀψι-* 'late', it was assumption that, together with *ἐπί*, the preposition (and prefix) *ὀπί* = Lith. *api-* 'around' had existed in the past. The preposition (prefix) *opi* = *ὀπί* was found in the Mycenaean texts in which *epi* = *ἐπί* also occurs.

The Mycenaean texts also confirmed the supposition that *σ* in the ending for dat. pl. of the *-o-* and *-ā-*stems was due to the influence of the consonant stems: Hom. *-οισι* and *-ησι* (Att. *-ᾱσι, -ησι*) appeared instead of *-οι(h)ι, -ᾱ(h)ι*, which were found in the Mycenaean texts as *-ol, -al*. The Mycenaean form of the dat. pl. *-ο(ι)ι(ν)* (graphically *-ol*) corresponds to the Hom. form for gen.-dat. dual *-οιν* and to the Arcadian form *-οιν* which is a contamination of the ending *-ou* (dat., instr. pl.) from *-oy-si, -oy-σως* (gen.-loc. dual.), and *(-oy)-sōm* (gen. pl.).

The primitive form of the medial ending *-(ν)τοι* (as in Arcado-Cyprian) was also confirmed,¹¹ cf. Myc. *esoto* = *έσο(ν)-το(ι)*, Att. *ἔσσονται, euketo* = *εὔχετο(ι)*, Att. *εὔχεται*.

Some archaic forms which later had undergone changes were also confirmed as for instance *enaripoto* (KN Sg 884) = *ἐν-άλιπτος*, while the forms *ἐν-άλειπτος, ἀλειπτός* 'anointed' have *ει* under the influence of *ἀλείφω, ἐν-αλείφω* 'to anoint, to polish'.

It is now possible to do away with the asterisk before a number of words and hypothetical forms which were unknown previously. These facts clearly show the preciseness of some of the conclusions made on the basis of the comparative-historical method and once again confirm the importance of this method for linguistics.

Some examples which demonstrate how new texts and facts contribute to the enrichment and improvement of the comparative-historical method are given below.

The older forms of many words are recorded in the Mycenaean texts and this made it possible to establish their etymology and to correct certain existing assumptions about them. For instance, until recently only the forms Ion. Att. *δοῦλος*, Dor. *δῶλος* 'slave' were known. The Mycenaean inscriptions showed that the oldest form of this word was *doero* = *δόελο(ς)* or *δώελο(ς)*. Obviously this is a derivative formed with the help of the IE suffix for *nomina agentis -elo-*, as for example in L. *famulus* 'servant' from **dʰam-elo-s*.

¹¹ Cf. Ruipérez 1952.

This fact confirms the old etymology of the word *δοῦλος* 'serf' as deriving from the root **dō(w)-* (or, if it is a Pelasgian word, from **dʰō(w)-*): originally meaning 'worker'.

Until recently it was thought that *τρέπω* 'turn', *τρόπος* 'turn, way, manner, fashion' corresponded to the OL. *trepit* 'vertit' and that both words were derived from the IE root **trep-*. But in the Mycenaean texts the forms *toroqejomeno* = *τροκῶειόμενο(ς)*, *torogo* = *τρόκῶο(ς)* are recorded and thus *τρέπω*, *τρόπος* are derived from the root **trekʷ-* and correspond to the L. *torqueo* 'turn'. This fact allows us to clarify the origin of the adjective *ἀ-τροκῶ-ής* 'precise (*unumwunden*); exact, sure'; it is derived from **ā-trokʷōs*: the labiovelar was not dentalized due to the dissimilatory influence of the preceding dental.

The labiovelar in *atorogo* = *ἀ(ν)θροκῶο(ς)* 'man' confirms the traditional etymology as 'face (with) a beard', i. e., 'a man whose face has a beard', cf. Gr. *ἀνθέρις* 'beard of an ear of corn', *ἀνθρεών* 'chin' and *ὄψ* gen. *ὠπός* 'face, look'.¹² Thus *ἀνθροπος* originally meant 'vir = man' as opposed to women, children and young people, cf. Gr. *ἀνῆρ* which means not only 'vir = man', but also 'homo'. For the formation, cf. *χρυσο-κόμης* 'golden haired' and Rum. *barbat* 'man' from L. *barbatus* 'bearded'.

Hesychius' gloss *νῆρ ἄμπελον* 'grapevine' (acc. sing.) is not clear as to its formation. In Knossos inscription Gv 863.2 the word *wejewē* = *F_εieF_ε(ς)* (nom. pl.) '(grape) vines' is found. The interpretation is reliable since in this inscription one finds the word *wonasi* = *Fo(ι)νιά(σ)ι* = Att. *οἰνάσι* dat. (loc.) pl. from *οἶνός*, -άδος f. 'grapevine' (or from *οἰνάδες* *ἀμπελώδεις τόποι*, Hesych.) and the ideogram FICUS 'fig'; furthermore after *wejewē* comes the ideogram GERMEN (or VINEA) 'shoot, sprout, sprig' and the figure 420. Thus the gloss *νῆρ* = *Fuῖρ* with the late change *ei* > *i*¹³ is the accusative of *Fειής*, which as an Arcado-Cyprian word corresponds to the Mycenaean *Fειύς*, since the ending (Att.) -εύς corresponds to Arcado-Cyprian -ής, cf. Arc.-Cypr. *ἱερής*, acc. *ἱερήν* = Att. *ἱερεῖς*, acc. *ἱερέα*. The etymology of the Mycenaean word *Fειύς* 'grapevine', recorded in the 14th-13th centuries B. C., is clear. This word is a *nomen agentis* formed by the suffix -εύς from the root **wey-* 'weave, twine' and means 'twining (plant)'. The existence of a word for 'grapevine' which is purely Greek and of IE origin from the 14th-13th centuries B. C. shows that *οἶνη* 'grapevine, wine' and *οἶνος*, dial. *Foῖνος* 'wine' are derived as IE words from **woy-nā* and **woy-no-s* and correspond to L. *vitis* 'grapevine' from **wey-ti-s* or **woy-ti-s*. All these words have been given as examples of a pre-IE substratum in Greece for many years: now their IE origin becomes clarified.¹⁴

Goth. *aqizi* f. 'ax' and its Germanic correspondences were isolated. Now Goth. *aqizi* from **agwis(i)ya* has an exact parallel in Myc. *aqija* = *ἀγῶια* from **agwisiya*.

Previously it was thought that *χρυσός* 'gold' and *χιτών* 'tunic' were Phoenician borrowings from the period of Phoenician maritime supremacy in the Mediterranean from the 12th to the 9th century B. C. Now, however,

¹² Cf. Güntert 1915, Pokorny 1951-69:41.

¹³ *ei* became *i* in the Argolic and Boeotian dialects during the 5th century B. C., in Attic in the 3rd-2nd century B.C.

¹⁴ See section 11.4.1.

it is clear that not only *kuruso* = $\chi\rho\upsilon\sigma\acute{o}(\varsigma)$, *kito* = $\chi\iota\acute{o}(\nu)$, but also some other Semitic borrowings such as *paraku* = $\beta\alpha\rho\alpha\chi\acute{\upsilon}(\varsigma)$ = Akkad. *barāq(tu)* 'emerald', are met in the Knossos and Pylos texts, i. e., they are from the 14th-13th centuries B. C. This fact suggests that there were connections between the Mycenaeans and the Semitic peoples in the Near East during the second half of the 2nd millennium B. C. and probably even earlier.

3.1.2. The Mycenaean Koiné

The Mycenaean texts posed some new and extremely interesting problems, one of them being the problem of the position of Mycenaean Greek.

Despite the fact that this dialect is attested in the 14th-13th centuries B. C. it can be neither common Greek nor a predecessor of Ionic-Attic, nor of Aeolic, and still less of Doric.

(1) The language of the Mycenaean inscriptions cannot be an ancestor of Doric and, on the whole, of northwestern Greek. The most glaring proof of this is the existence of the shift *ti* > *si* in Mycenaean, while *ti* was preserved in Doric and in general in Western Greek: *ekosi* = $\varepsilon\chi\omicron(\nu)\sigma\iota$, *didosi* = $\delta\acute{\iota}\delta\omicron(\nu)\sigma\iota$ (or $\delta\acute{\iota}\delta\omicron\sigma\iota$ from $*didyt\acute{i}$),¹⁵ *posi* = Dor. $\pi\omicron\tau\acute{\iota}$, Arc. $\pi\acute{o}\varsigma$, *rawakesijo*, a derivative from *rawaketa* = $\lambda\alpha F\text{-}\acute{\alpha}\gamma\acute{\epsilon}\tau\acute{\alpha}(\varsigma)$, *korisijo*, a derivative from *korito* = $K\acute{o}\rho\iota(\nu)\theta\omicron(\varsigma)$, *zakusijo*, a derivative from $Z\acute{\alpha}\kappa\upsilon\nu\theta\omicron\varsigma$, etc. This and other similar facts show that Mycenaean is a specific dialect which cannot be common Greek.

(2) Furthermore, the Mycenaean dialect cannot be the ancestor of the Ionic-Attic dialect because it had specific features which distinguish it from the latter: *a*(ν), *a*(μ), *a* ρ ($\rho\alpha$), *a* λ ($\lambda\alpha$) from η , η , η , η are typical of the Ionic-Attic dialect, while in such cases in Mycenaean one comes across an *o*, cf. *pemo* = $(\sigma)\pi\acute{\epsilon}(\rho)\mu\omicron$, Att. $\sigma\pi\acute{\epsilon}\rho\mu\alpha$, etc. (see below); cf. also Myc. *apu* = Arc.-Cyp., Lesb., Thess. $\acute{\alpha}\pi\acute{\upsilon}$, but Att. $\acute{\alpha}\pi\acute{o}$, etc. (see below).

(3) The Mycenaean dialect shows many features which bring it close to Aeolic but it cannot be the ancestor of Aeolic either because one comes across specific features in it which distinguish it from Aeolic: IE η , η , η , η frequently appear as *a*, cf. *akitito* = $\acute{\alpha}\text{-}\chi\iota\tau\omicron(\varsigma)$, *apeasa* = $\acute{\alpha}\pi\text{-}\acute{\epsilon}\alpha\sigma(\sigma)\alpha$ from $*\text{-esptya}$, etc. (see below).

All the data show that Mycenaean is a mixed dialect, a koiné.¹⁶ This becomes clear from the treatment of the IE syllabic liquids and nasals which appear sometimes as *a* (α , $\alpha\nu$, $\alpha\mu$, $\alpha\rho$, $\alpha\lambda$) and sometimes as *o* (\omicron , $\omicron\nu$, $\omicron\mu$, $\omicron\rho$, $\omicron\lambda$):¹⁷

(1) Forms with *a*

-*a* ending for acc. sing. (and pl.) of the consonant stems: *pereuronade* (PY) = $\Pi\epsilon\upsilon\text{-}\rho\acute{o}\nu\acute{\alpha}\text{-}\delta\epsilon$; *amotejonade* (PY) = $\acute{\alpha}\mu\omicron\tau\epsilon\iota\omega\nu\alpha\text{-}\delta\epsilon$.

a- = $\acute{\alpha}$ -, $\acute{\omega}$ - 'no'; *akitito* (PY) = $\acute{\alpha}\text{-}\chi\iota\tau\omicron(\varsigma)$; *akorowe* (KN, PY) = $\acute{\alpha}\text{-}\chi\rho\omega F\eta(\varsigma)$; *akotono* (PY) = $\acute{\alpha}\text{-}\chi\tau\omicron(\iota)\nu\omicron(\varsigma)$ [$\text{-}\omega\nu(\nu)\omicron(\varsigma)?$]; *akorota* (PY) = $\acute{\alpha}\text{-}\chi\rho\omega(\omicron)\tau\alpha$; *anamoto* (KN) = $\acute{\alpha}\nu\text{-}\alpha(\rho)\mu\omicron(\sigma?)$ -

¹⁵ Cf. Skt. *dādāti*, see Schwyzler 1934-39: 669, 686.

¹⁶ About the mixed nature of the Mycenaean dialect see also Mühlestein 1956b: 95, footnote 9; Ruipérez 1956: 118-119.

¹⁷ See details in Georgiev 1972a.

το(ς) *anono* (PY) = ἄνωνο(ς); *anowe* (PY) = ἄν-ώFη(ς); *anowoto* (KN) = Dor. ἄν-ούατος from *-owsē-to-s;¹⁸ *atarasijo* (PY) = ἀ-τάλασι(ο)ς; etc.

arepa (PY) = Att. ἀρετῶν with αῶ from *r*; *arepazoo* (PY) = ἀρε(ι)τῶν-ζοο(ς) and *arepozoo* (PY); *arepate* (PY) = ἀρε(ι)τῶν-α(ι) with -ατ- from -ητ-; *apeasa* (KN) = ἀπ-έασ(ο)α(ι) nom. pl., cf. Arc. ἔασσα from *esētyā; *eneka* = ἔνεκα with -α from η; *erapemena* = Att. ἐραπειμένη from *wṛp-; *hatero* (PY) = ἡτερο(ς) from *sm̥-tero-s; *kapo* = Att. καποτός with αῶ from *r*; *karaapi* (PY) = καρά(π)πῳ from *krās-η(t)-bhīs; *kemaqeme* (KN) = χε(ι)μα-γῶε(ι)-μ(ν), Att. χεμαῖον from *gʰeymē-; *pawea* (KN), *paweha* (KN, PY) = πα(ι)Fεα < *bʰr̥wes-; *pema* (KN, PY) = Att. σπέρμα from *spermē and *pemo* (PY) = (σ)πέ(ο)μο; *rapte* (KN, PY) = ῥαπτή(ο) 'tailor' from *wṛp-tē(r), f. *rapitira* from *wṛp-tryā; etc.

(2) Forms with o

amo (KN) = Att. ἄμα, *amota* (KN, PY) = Att. ἄματα, *amosi* (PY) = Att. ἄμασι; *apigoto* (PY) = Att. ἀπιγί-βατος from *g-w̥h̥-to-s; *enewopezo*, *enewopeza* (PY) = ἐν(ν)Fό-πεζο(ς), -α, Att. ἐννέα; *opawota* (PY) = ὀπάFοτα 'earmuffs' from *op-aws-η-tā; *pemo* (PY) = (σ)πέ(ο)μο, Att. σπέρμα; *qetoropopi* (PY) = κωτερό-πο(π)πῳ, Att. τετρά-ποα, cf. Thess. τετρο-ετηρίδα; *topeza* (KN, PY) = τό(ο)πεζα, Att. τετόπεζα from *kwt̥p-pedyā, cf. Arc. τετόπιαν = Att. τετόπιον; etc.

The following example is especially convincing: in Knossos only *pema* is used (KN Ga864, 675, 680.1); in Pylos one often comes across *pemo*; *pema* was found in two tablets which were written by the same hand (PY Er 312, 880), while *pemo* is written by three or four different hands.¹⁹ One can draw the conclusion that the *a* is more typical of the Knossos dialect, while the *o* is more typical of the Pylos dialect, but that the two forms existed in both dialects.

The following example is also typical: in the Knossos tablets we find *kotoina* (KN Uf 1031, 1022; 981), while in the Pylos texts, in which this word (and its derivatives) is found very frequently, *kotona* is used exclusively. Usually this word is etymologically related to κτίζω 'to people, to found, to settle, to inhabit' but its forms and meaning are clearer if it originated from *k̥tō-nyā, cf. κτήνος 'flock and herds', κτήμα, κτέωνον, κτέαρ 'piece of property, possession', κτάομαι 'to acquire, to get, to procure'. In that case *kotona* = κτῶν(ν)α is an Aeolic form while *kotoina* = κτοῖνα (Rhodos, Karpathos?) from *κτωῖνα is of Ionic origin.

The mixed character of the Mycenaean dialect is proven by another fact. As was already mentioned, *ti* in Mycenaean shifted into *si*, but there are cases in which the *t* is preserved: *tinwatijao*, *tinwati* [- -] = *tinwasija*, *tinwasijo* (PY); *tutijeu* = *tusijeu* (PY); *ratijo* (KN) = *ráuo*(ι); *miratija* (PY) = *Milátau*(ι); *otinatwo* (PY) = *O(ο)τί-ναFo*(ς); *tatigoweu* (PY) = Att. Στησι-.

One could also speak of dialectal differences on the basis of the fact that the sign *a*₂ (*ha*) is more frequently used in the Pylos inscriptions than in the Knossos inscriptions.²⁰ This means that *h* (before an *a*) from *s* was preserved better in the Pylos dialect than it was in the Knossos dialect.

The mixed character of Mycenaean is also evident in the suffix -ēw-(i)γā, which is found in three forms:²¹

¹⁸ Cf. similar Hom. ἄ-μῆροτος 'immortal': η > α and *r* > γ.

¹⁹ Cf. Mühlestein 1956a.

²⁰ Cf. Ventris and Chadwick 1956: 75.

²¹ Cf. Ruipérez 1956: 118-119, 260.

-ewija = -ēF(i)ḡa: *aterewija* (PY) = *AtqēF(i)ḡa from *Atqēús; *esarewija* (PY) from *esareu*.

-ewa = -ē(i)Fa or -ηF(F)a (from -ηFḡa): *akerewa* (PY) from *akereu*.

-eja = -ēia (from -ēḡia < -ēFḡa): *ijereja* (PY) = Att. *iéθeia* 'priestess' from -ēF(i)ḡa; *idomeneja* (PY) = *Idoménēia from -ēF(i)ḡa, cf. *Idomeneús.

A similar mixture is observed in the suffix -tr(i)ya:²²

-tirija = Att. -τιρια: *meretirija* = μελέτιρια; *aketirija* (KN, PY, MY) = ἀκέ(σ)τιρια; *otirija* (PY) = ὀ(σ)τιρια; -tira₂ = (Att.) -τιρια: *meretira₂* (PY) = *meretirija*; *rapitira₂* (PY) = ῥάπιτιρια; *pekitira₂* (PY) = πέκιτιρια; *aketira₂* (PY) = *aketirija*; *otira₂* (PY) = *otirija* (PY).

-tera = Homer. -τερια, Aeol. -τεροια: *otera* (MY) = *otirija*, *otira₂* (PY) = ὀ(σ)τιρια.

The form -tera, which is found in the Mycenaean texts, undoubtedly corresponds to Hom. -τεια or Aeol. -τεροια. Nonetheless in a tablet from Mycenae one finds *aketiri[- -]* which corresponds to *aketirija* from Knossos and Pylos.

A similar "Aeolism" which should also be mentioned is *kuruso* (PY) = *χρῦς(σ)ος, Hom., Ion. χρύσεος, Att. χρυσός, Ep. χρύσειος 'golden, gilded', *popuro*₂ (KN) and *popureja* (KN) = Aeol. πορφύρεος, Ion. πορφύρεος.²³ Cf. also *wirinijo*, *wirinejo*, *wirineo* (KN) = Φόινεο(ς).²⁴

The presence of forms with preserved *w* together with forms without *w* also demonstrates the mixture of two dialects, for instance:²⁵

wanakate (KN, PY) = Φανάτε(ι), *weto* (PY) = Φέτο(ς), *wodowe* (PY) = Φο(ρ)δóFε(ν), Hom. *ξοδόεν*, *diwe* (KN, PY) = ΔίFε(ι), *wirinijo*, -neo (KN) = Φόινε(ι)ο(ς), *wiriza* (KN, PY) = Φοίζα, Att. *φίζα*; etc., but:

eneka (KN, PY) = Att. *ἐνεκα*, Ion. *ἐνεκα* from *ēnF-, *erapemena* (KN) = Att. *ἐραπειμένη* from *wḡp-, *ijereja* (KN, PY) = Att. *iéθeia* from -ew-ya, *qoo* (PY) = Att. *βοῶν* from *g^wow-, *rapte* (PY) = ῥαπτή(ρ), *rapitira₂* (PY) = ῥάπιτιρια from *wḡp-, *rijo* (PY) = Att. *ρίον* from *wriso-m, *teo* (PY) = Att. *θεός* from *d^hweso-s, etc.

This fact is also confirmed by morphology and vocabulary. In a Knossos inscription there is the form *kemageme* (KN Uf 839) = κε(ι)μα-γ^wε(τ)με(ν), Att. *χειμάζειν*: the Knossos form is an athematic infinitive with the ending -μεν; -g^weme = -γ^wε(ι)-με(ν) corresponds exactly to the Homeric form for the future tense *βείομαι*, *βέομαι* (future with a thematic vowel from the athematic verb *βεῖμ, like *ἔσομαι* to *εἰμί*, *ἔδομαι* to *ἔδμεναι*), while the corresponding Attic form *χειμάζω* is derived from *g^wyō, i. e., from another grade of the root diphthong *ey*. The infinitive ending -μεν is met in Thessalian, Boeotian, in the Northwestern dialects, and as an Aeolism in Homeric but not in Ionic-Attic and Arcado-Cyprian: the ending -ναι is characteristic of Arcado-Cyprian.²⁶

The ending -εν is more frequent: *terejae* (PY) = τελειά-ε(ν), *wozee* (PY) = Φο(ρ)ζε-ε(ν), *eree* (PY) = ἐλέ-ε(ν), *a₂rie* (PY) = ᾠ₂ ἱ-ε(ν) 'ἱέναι', *aresanie* (PY) = ᾠ₂ ἔ(ν)σ-άν-ε(ν).

²² Cf. Chantraine 1956: 99-100.

²³ Cf. Mühlestein 1956b: 93-94.

²⁴ Cf. Ventris and Chadwick 1956: 89, 75.

²⁵ See Georgiev 1956 f.

²⁶ Cf. Chantraine 1948-53: 1, 485-486; Schwyzler 1934-39: 106.

There is a fluctuation of *-e* and more rarely *-i* in the ending for the dat. sing. of the consonant stems: *posedaone* (PY) = *posedaoni* (PY), *koretere* (PY) = *koreteri* (PY). The distribution of this ending is as follows: in Knossos usually *-e*; in Pylos more frequently *-e*, rarely *-i*; in Mycenae usually *-i*, rarely *-e*.²⁷

Another example is the use of the prepositions *μετά* and *πεδά*: *μετά* is found in the Knossos and Pylos inscriptions while *πεδά* is found in a Knossos inscription (KN X 114). The preposition *μετά* is typical of Ionic-Attic and Northwestern Greek, while *πεδά* is typical of Arcadian, Cretan, East Laconian, and the dialect of the island of Thera.

In *aresanie* (PY An 724.2) = $\check{\alpha}_Q \check{\epsilon}(\nu)\sigma\text{-}\acute{\alpha}\nu\text{-}\iota\text{-}\epsilon(\nu)$ (Att. *εἰς-αν-ιέναι*)²⁸ the prefix (and the preposition) $\check{\epsilon}(\nu)\sigma$ is attested: the neologism $\acute{\epsilon}\nu\varsigma$ (Cret.: Knossos, Gortynian; Argol.), $\acute{\epsilon}\varsigma$, *εἰς* (Ion.-Att., Dor., Lesb.), *ἰς* (Pamphylian, Cret., Vaxos) is not recorded in Arcado-Cyprian, in which only $\acute{\epsilon}\nu$, $\acute{\iota}\nu$ is used. However, in *inamata* (PY Ma 126.1) = Att. $\acute{\epsilon}\nu\text{-}\acute{\alpha}\mu\mu\alpha\tau\alpha$ pl. 'overcoat' the same prefix (and preposition) appears in the form²⁹ characteristic of Arcado-Cyprian and Cretan, while in *eneesi* (PY En 609.2) = Att. $\acute{\epsilon}\nu\text{-}\epsilon\iota\sigma\iota$, the form of the prefix is $\acute{\epsilon}\nu$.

The Attic preposition and prefix $\acute{\alpha}\nu\acute{o}$ appears in the Mycenaean inscriptions as *apu* = $\acute{\alpha}\nu\acute{o}$: this form is characteristic of Arcado-Cyprian, Lesbian, and Thessalian.

The preposition (and prefix) $\xi\acute{\nu}\nu$ is attested in the form *kusu*, which is found in Homeric and Attic (together with $\sigma\acute{\nu}\nu$), while in Arcadian only $\sigma\acute{\nu}\nu$ appears.

In the Mycenaean inscriptions the prepositions $\acute{\epsilon}\pi\acute{\iota}$ and $\delta\pi\acute{\iota}$ appear; $\delta\pi\acute{\iota}$ is preserved in the classical period in only a small number of derivatives of the type $\delta\pi\alpha\text{-}(\sigma)\theta\epsilon\nu$.

There is a fluctuation in the words *pia₂ra* (PY) = Hom., etc. *φιάλη* and *pijera₃* (PY) = koiné *φιάλη*.

The verb $\acute{\alpha}\gamma\theta\epsilon\acute{\iota}\nu$, which is recorded in the Pylos inscriptions (*akerese*), is characteristic of Aeolic and Eleian. It appears together with the synonym $\acute{\epsilon}\lambda\epsilon\acute{\iota}\nu$ (*eree* PY), which appears in Homeric, Attic, and other dialects.

These facts show that Mycenaean is a **mixed dialect** resulting from the mixing of two Greek dialects: during the Mycenaean period in southern Greece there was a **common language**, a **koiné** which was used until the end of the Mycenaean period. This common language was like the koiné of the post-classical period: the ruling class and the town population in the centers of the Mycenaean culture spoke it. This does not exclude the existence of other dialects.

3.1.3. The Three Principal Greek Dialects

The ancient Greeks, from the time of Hesiod (fr. 7) onward, were aware that their language consisted of three main dialects: Ionic, Aeolic, and Doric. Buck (1955: 3) writes: "The existence of Ionic, Aeolic, and Doric elements in the people and speech of Greece is an undoubted fact in Greek history,

²⁷ Cf. Ventris and Chadwick 1956: 76.

²⁸ See Georgiev 1965c: 243.

²⁹ Cf. Schwyzler 1934-39: 454.

and one of the first importance to an understanding of the dialect relations." Moreover, the ancient Greeks knew that some of their dialects resulted from a mixture of dialects (cf. Strabo VIII, 333).

During the 19th century when numerous new inscriptions were found and studied, another group of dialects called Arcado-Cyprian (including Pamphylian), was differentiated. Maintaining the old tripartition, most scholars grouped Arcado-Cyprian together with Lesbian, Thessalian, and Boeotian (=Aeolic) in an (Old) Achaeian or Aeolic group.³⁰ Others separated Arcado-Cyprian from the other dialects and thus arrived at a classification into four groups: Ionic-Attic, Arcado-Cyprian, Aeolic, and Western Greek.³¹ Then, by opposing the western group to the other dialects, they established, in the spirit of Schleicherian conceptions, the following genealogical tree for the Greek dialects: (a) Pre-Doric layers or East Greek: 1) Ionic-Attic, 2) Arcado-Cyprian, 3) Aeolic; (b) West Greek: 1) Northwest Greek, 2) Doric.³²

Recently just before or during the decipherment of the Mycenaean inscriptions, Porzig (1954b) and Risch (1955) tried to connect Arcado-Cyprian more closely with Ionic in a group called "Eastern Greek" or "Southern Greek".

The decipherment of Mycenaean Greek necessitated a reevaluation of the problem of the Greek dialects. The question of the position of Mycenaean among the other Greek dialects became one of the most important problems in Mycenaean studies.

Taking the thesis about the "Achaeian" group into consideration and keeping in mind the archaic character of Mycenaean, as well as some of its peculiarities, Ventris and Chadwick (1953:103) called Mycenaean Greek "Achaeian" and defined it as "a hypothetical ancestor of the Arcado-Cyprian and of the Aeolic dialects",³³ while Palmer (1955a: 3; 1955b: 36) more cautiously considered it to be an ancestor of the Arcado-Cyprian.

Risch (1956) was the first to attempt a more detailed treatment of this problem. But rather than trying to solve the question of the Mycenaean dialect he tried to justify his old point of view (the thesis of Ionic-Arcado-Cyprian relationship).³⁴ (Porzig's and) Risch's thesis was accepted by Chantraine (1958b:508). Chadwick (1956; 1958a: 78) later modified his former conception, accomodating it to that of (Porzig and) Risch. Pisani (1955; 1959a; 1959b: 181-188) also gave a similar hypothesis.

Adrados (1956: 243), because he was not bound by (Porzig's and) Risch's hypothesis, was able to define the place of Mycenaean more precisely, that is as follows: "Mycenaean, like its later form, Arcado-Cyprian formed a transition between Ionic-Attic and Aeolic." He also stressed the drawbacks of Risch's thesis.³⁵

Gallavotti (1958) considers Mycenaean to be Aeolic, which contradicts the facts. According to Ruijgh (1958), Achaeian was differentiated from

³⁰ Cf. Hoffmann 1891-98: 98; Hoffmann and Debrunner 1953: 36-39. This opinion is shared by Thumb, Kretschmer, Kieckers, Tovar, Adrados, Ruipérez, Brandenstein, Scherer, etc.

³¹ Meillet 1930: 79; Lejeune 1947: 7.

³² Schwyzler 1934-39: 75-78; Buck 1955.

³³ Cf. also 1956: 74-76; Chadwick 1954: 17.

³⁴ Risch 1956: 170.

³⁵ See Adrados 1956: 247-249.

Ionic and Aeolic in the 2nd millennium. Vilborg (1960: 22) hesitates between Risch's and Palmer's conceptions.

Contrary to Risch's thesis that Ionic had taken form after 1200 B. C., the study of Mycenaean proved the correctness of the traditional conception of the archaic character of the tripartition of the Greek dialects. The composite nature of Mycenaean, corresponding in this respect almost completely to the composite nature of Homeric, shows that Proto-Ionic (=Iawonic) and Proto-Aeolic (=Aiwolic), the mixture of which resulted in Mycenaean, had existed before the 14th century B. C.

Later, however, Risch (1966: 157) had to accept that there were traces of two dialects in Mycenaean: he called them "normal Mycenaean" (*pemo*) and "special Mycenaean" (*pema*). He concluded: "one may suppose that normal Mycenaean was the language of the palace or the aristocracy, and that special Mycenaean was in reality the language of the lower classes." Later he abandoned his thesis of the "Northern Greek dialect", i. e., "Doric-Aeolic", and accepted that Aeolic already differed from Doric during the middle of the 2nd millennium B.C.³⁶ Thus Risch gradually had almost arrived at the view which I have supported since 1956. His terms "normal Mycenaean" and "special Mycenaean" actually coincide with Proto-Aeolic (*pemo*) and Proto-Ionic (*pema*) but he could not use the actual terms since he had proscribed Proto-Ionic from the Mycenaean period.

There are many facts, especially the so-called **double forms** (Ionic and Aeolic),³⁷ which show that Mycenaean is a **mixed dialect**. These data can be classified into two groups: **certain** data and **less certain or probable** data.

The double forms in the Mycenaean texts which must be considered to be certain are the following:

(1) *a* (*akitito*, *akotono*, *apeasa*, *erapija*, *erapo*, *a₂tero*, *pa₂wea*, *pema*, *rapte*, etc.) and *o* (*amo*, *amota*, *amosi*, *arepozoo*, *eropaketai*, *pemo*, *qetoropoi*, *topeza*, etc.) from the syllabic liquids and nasals.

The double forms such as *pema* = (o)πé(o)μα and *pemo* (o)πé(o)μο, *arepazoo* = ἀλε(i)φαζoo(s) and *arepozoo* = ἀλε(i)φοζoo(s), *erapo* = Ἐλάφω(v) and *eropaketai* = ἑλοφ-αγέτᾱ-, are extremely important.

Double forms with *a* and *o* are attested in numerous examples from the Mycenaean texts: this important fact alone is sufficient to prove the mixed character of Mycenaean but we have other reliable data as well.

(2) Adjectives of material which end in *-e(j)o(s)* (*dowejo*, *erepatejo* = *erepateo*?, *kutesejo*, *oreneja* = *orenea*, *ponikeja* = *ponikea*, *wirinejo* = *wirineo*, etc.) and in *-(ij)o(s)* (*kakijo*, *ponikija*, *wirinijo*; *kuruso*, *kuteso* = ? *kutesejo*, *popuro*, cf. *popureja*, *wirino* = ? *wirinejo*) = Ion.-Att. *-e(i)os* and Aeol. *-ios*, *-(i)os*.

(3) The prepositions *meta* and *peda* = Ion.-Att. μετά and Aeol. πεδά.

(4) Verbs ending in *-ew* (*toroqejomeno*), like those in Ionic-Attic, which appear together with athematic inflection of these verbs (*tereja* = τελεῖα 3rd. pers. sing. pret. athematic).

³⁶ Cf. Risch 1968: 209.

³⁷ Mycenaean examples are given amply in my article Georgiev 1961a; for the following cf. also Grinbaum 1959.

There are also some other double forms in Mycenaean but they cannot be considered to be absolutely certain because not all the specialists agree about their interpretation. Some of the less certain double forms are given below.

(5) *Nomina agentis* f. ending in *-tr(i)ja* (*aketirija* = *aketira*₂, *meretirija* = *meretira*₂, *otirija* = *otira*₂, etc.) and in *-tera* (*otera*, MY Oe 106.2)³⁸ = Ion.-Att. *-τοια* and Hom. *-τειρα*, Aeol. *-τεροα*: the interpretation of *otera* as *ō(τ)τοια* is however not accepted by all specialists.

(6) The demonstrative pronouns *tosode* and *tosone* (MY Oe 118) = *τοσ(σ)ο(ι)νε*.³⁹

(7) Infinitives ending in *-na(i)* (*porena* = Hom. *φορηῖναι*),⁴⁰ and in *-me(n)* (*kemageme* = *χε(ι)μα-γῶε(τ)με(ν)*, Att. *χειμάζειν* 'to spend the winter') = Ion.-Att. *-ναι* and Aeol. (= Hom., Thess., Boeot.) *-μεν*, Hom., Lesb. *-μεναι*, but the interpretation *porena* = *φορηῖναι* is not accepted by all specialists.

(8) The verbs *eree* (PY An 724, etc.) and *agre-* (*akerese*) = Ion.-Att. *ἐλεῖν* (*αἰρεῖν*) and Aeol. *ἀγοεῖν*, but the interpretation of *eree* = *ἐλέε(ν)* is not accepted by all specialists.

Arcado-Cyprian (including Pamphylian) is also a mixed dialect.⁴¹

IE syllabic liquids and nasals appear as *a* and *o*: Arc. *ῥασσα* (Myc. *ap-easa*) with *a* from *η*; *-κασσι* with *a* from *η* and *σι* from *τι*; *ῥακᾶδες* comes from *ῥακος* (= *ῥακτος*) with *α* from *γ*, but Arc. *δέκο*, *ἐκατόν* = Att. *δέκα*, *ἐκατόν*, Arc. *ἐφθορκών* = Att. *ἐφθορκώς*, Arc. *τέτορτος* = Att. *τέταρτος*, Cyp. *κορζία* = Att. *καρδία*, etc.

Dat. pl. of the consonant stems in *-σι* (Arc.-Cyp.) and *-εσσι* (Pamphylian).

The pronouns *ῥδε* and *ῥνυ*, *ῥνι*.

The preposition *ὄν* (*ῥν*) and *ἀν-* (Arc. *ἀν-ἐθνσε* in an inscription from the 6th century).

The preposition *πεδά* (Arc. *πέ*) and *μετά*.

The particle Arc. *ῥν* and Cyp. (and Arc.) *νε*.

3.1.4. Mycenaean, Homeric, and Arcado-Cyprian

The question of the Mycenaean dialect is very closely connected to the complex problem of the Homeric dialect. It is therefore necessary to treat them together.

In order to elucidate the position of Mycenaean among the other Greek dialects we must examine it in comparison with Homeric and Arcado-Cyprian, to which it is very closely related. At the same time, since Homeric and Arcado-Cyprian have many elements in common with both Ionic and Aeolic, we must also clarify the relationship Mycenaean has to these dialects.

³⁸ Cf. Chantraine 1956: 102-103.

³⁹ Cf. Vilborg 1960: 20, 101. Cf. also *ode* (PY Cn 300.8), see Georgiev 1956 (Supplement): 59; and *onu* (KN X 681), cf. Ruijgh 1958: 114.

⁴⁰ Cf. Ventris and Chadwick 1956: 285; Bartoněk 1959: 122.

⁴¹ Cf. Buck 1953: 189: "many important Arcado-Cyprian specific features are common with Aeolic... There is undoubtedly a common development but there is no complete unity; however, Arcado-Cyprian does not have some of the most characteristic features of Aeolic and besides it shows some common specific features with Ionic-Attic and also its own specific features." Cf. also Buck 1955: 8.

This way of tackling the problem excludes Doric (Western Greek); it is not directly connected with Mycenaean, as is obvious from the fact that Doric has preserved the ancient cluster *ti* which is changed into *si* in Ionic, Aeolic, Mycenaean, Homeric, and Arcado-Cyprian. During the period of the Mycenaean civilization, the ancestors of what later became the Dorians inhabited northwest Greece. Doric (Western Greek) is, in comparison to Ionic and Aeolic, the most archaic Greek dialect. Archaisms such as *τι*, *-μες*, *τοί* (*ταί*), *ἱαρός*=Skt. *iśrah* from **isaro-s*, as well as some other peculiarities (partly innovations) such as future endings in *-σέω*, *κα* (*τόκα*, *πόκα*, *δκα*), *γα*, *ἐμὴν* *ἐμοί*, *ἔλ(ι)ω* *θέλω*, etc., clearly distinguish Doric from the other dialects. Of course, in Doric we find several isoglosses which are also common to Ionic and Aeolic: this is a well-known phenomenon in dialects belonging to one and the same language, even when they differ very greatly from each other. For this reason our comparisons deal with examples which have corresponding forms in Doric as well.

In order to determine the degree of relationship between Mycenaean, Homeric, and Arcado-Cyprian, as well as the relations of these dialects to Ionic and Aeolic, we must compare the presence or the absence of the specific features which distinguish Ionic from Aeolic. They are as follows:

The treatment of IE syllabic nasals and liquids: Ion.-Att. *α*, *αν*, *αμ*, *αφ/ρα*, *αλ/λα* compared to Lesb., Thess., Boeot. (= Aeol.) *ο*, (*ον*, *ομ*), *οφ/ρο*, *ολ/λο*.

Ion.-Att. *π-* compared to Thess. (Aeol.) *πι-*: *πόλις*, *πόλεμος* and *πτόλις*, *πτόλεμος*.

Ion.-Att. *-τρια* compared to Lesb. (Aeol.) *-τερρα* (Hom. *-τειρα*), suffix for *nomina agentis* f.

The different vowel gradation in the adjective Att. *ἱερός*, Ion. *ἱερός* (Ion. *ἱρός*, *ἱρός* is borrowed from Aeolic, cf. Thumb and Scherer 1959:250), compared to Lesb. (=Aeol.) *ἱρος*.

Gen. sing. (Hom.) *-οο*, Ion.-Att. *-ου*, compared to Thess. (=Aeol.) *-οιο*.

Dat. pl. of consonant stems Ion.-Att. *-σι* compared to Lesb., Thess., Boeot. (= Aeol.) *-εσαι*.

The ending *-φι* (Boeot., Hom.), which is lacking in Ion.-Att.

Dual *-οιιν* (Hom.), *-οιν* (Ion.-Att.) compared to Arc. (= Aeol.) *-οινν*: but this may be an archaism preserved only in Arcadian.

The pronoun *μιν* 'αὐτόν' (Ion., Hom.) compared to *νιν* (Lesb., Aeol.); Ion. *νιν* is probably borrowed from Aeolic.

The demonstrative pronoun (and article) nom. pl. *οί*, *αί* (Ion.-Att.) compared to Thess. (also *οί*), Boeot. (= Aeol.) *τοί*.

The demonstrative pronoun Ion.-Att. (Hom.) *ὅδε* compared to Thess. (= Aeol.) *δ'νε*, Arc. *δ'νί* (and *ὀδε*), Arc.-Cypr. *δ'νν*.

The demonstrative pronoun nom. sing. n. OAtt. *τοτο*=Myc. *toto*: but it may be an archaism.

The numeral f. Ion.-Att. (Arc.) *μία* compared to Lesb., Thess., Boeot. (= Aeol.) *ἑα*.

The *μ*-inflection of contracted verbs is characteristic of Lesb., Thess. (Boeot. and Arc.-Cypr.), while *-εω*, etc. is used in Ion.-Att.

The verbal ending Ion.-Att. *-(ν)ται* compared to Arc. (Aeol.?) *-(ν)ροι*; but it may be an archaism preserved in Arcadian.

The extension of *-ζ-* in the future and aorist of verbs ending in *-ζεω*, which is typical of Thess., Boeot. (partly), Arc.-Cypr., and Hom. (partly), compared to Ion.-Att. *-σ(α)-*.

Infinitives in *-ναι* (Ion.-Att.) compared to Thess., Boeot. (= Aeol.) *-μεν*, Lesb. *-μεναι*.

Part. perf. act. in *-(κ)ώς*, *-(κ)ότος* (Ion.-Att.) compared to Lesb., Thess., Boeot. (= Aeol.) *-(κ)ων*, *-(κ)οντος*.

Patronymic adjectives in *-ιος* (Lesb., Thess., Boeot. = Aeol.) instead of *gen.* sing. of the father's name (or patronymics in *-δης*, Ion.-Att.).

Adjectives of material in *-ε(ι)ος* (Ion.-Att.) compared to adjectives of material in *-ιος*, *-(ε)ος* (Lesb., Thess. = Aeol.).

The prepositions Ion.-Att. *ἀπό*, *ἐν*, *μετά* compared to Lesb., Thess. (= Aeol.) and Arc.-Cypr. *ἀπύ*, *ἐν* (*ἐν*) (Lesb., Boeot. = Aeol.), and Arc. *πεδά*.

The preposition *ἐν*, together with *ἐν* in Hom. and Att. (and Ion., cf. *ἐν* from **ἐν-ιος*) compared to *ἐν* in the other dialects.

The conjunctions Ion.-Att. (and Arc.-Cypr.) *καί*, Ion.-Att. (Arc.) *καί*, compared to Lesb. (= Aeol.) *καί*, *αί*.

The particle Ion.-Att. (and Arc.) *καί* compared to Lesb. Thess. (= Aeol.), Cypr. (Arcad.) *καί*. Ion.-Att. *αἰγεῖν* (*ἐλεῖν*) compared to Lesb. (= Aeol.) *αἰγεῖν*, Thess. *αἰγεῖν* 'αἰγεῖν'.

In the above comparisons such specific features as the shift of *ā* into *η*, *methathesis quantitatis*, the various contractions, the labialization or dentalization of the labiovelars, etc. have not been taken into account since these are late phenomena (after the 12th century B. C.). Furthermore, some uncertain cases, e. g., *πρός*, *πός*, *posi*, have been omitted.

When discussing the 2nd millennium B. C. we will use the terms **Iawonic** (cf. Myc. *ijawone*, Hom. *ἰῶνες*) and **Aiwolic** (cf. Myc. *aiworo* = *Aἰ-Φολος*) to denote Proto-Ionic and Proto-Aeolic. The correspondences of the specific features of Homeric, Mycenaean, and Arcado-Cyprian (including Pamphylian), as compared to those of Iawonic and Aiwolic are given in Table 3. The majority of these examples are certain.

The isoglosses in Table 3 allow us to draw the following conclusion:

Homeric, Mycenaean, and Arcado-Cyprian share a large number of common specific features: therefore they are very closely related to each other.

In these three dialects there are **double forms** which represent a mixture of Iawonic and Aiwolic elements. The majority of these double forms, 13 (12) in number, are found in Homeric:⁴² *a* and *o*; *π-* and *πτ-*; *-ov* and *-ow*; *-σι* and *-εσσι*; *οἱ* and *τοί*; *μία* and *ἰά*; *-εω* and *-ηι*; *-σ(σ)-* and *-σ(σ)/ξ-*; *-ναι* and *-μεν*; *-ώς* and *-ων*; *-(δ)ης* and *-ιος*; *ἄν* and *καί*; *αἰγεῖν* (*ἐλεῖν*) and *αἰγεῖν*.

This larger number of double forms may be due to the fact that Homeric is much better attested than Mycenaean and Arcado-Cyprian; however, it could also be explained by the later influence of Ionic (and Attic) on Homeric.

In Mycenaean there are 8 (11) double forms, 4 (5) of which coincide with the Homeric forms: *a* and *o*; *-tr(i)ja* and *-tera*; *tosode* and *tosone*; (*ode* and *onu*?) ; (*eme* and *ijo*);⁴³ *-eō* (*toroqejomeno*) and *tereja*; *-na(i)* and *-me(n)*; *-e(j)o(s)* and *-(ij)o(s)*; *an-* and *o(n)-*?⁴⁴ *meta* and *peda*; *ote* and *oda*?; *eree(n)* and *agre-*. In Arcado-Cyprian (including Pamphylian) we find 7 double forms, 4 (5) of which coincide with the Homeric ones: *a* and *o*; *-σι* and *-εσσι*; *ὅδε* and *ὅν*; *-σ(σ)-* and *-σ(σ)/ξ-*; *ἄν* and *ὅν*; *μετά* and *πεδά*; *ἄν* and *καί*.

⁴² For Aeolisms in Homeric see Bartoněk 1961.

⁴³ *ijo* = *io-*, see Vilborg 1960: 102.

⁴⁴ Lejeune 1958: 39, 50; Vilborg 1960: 20.

Table 3

Correspondences of the Specific Features of Homeric, Mycenaean, and Arcado-Cyprian as Compared to Iawonic and Aiwolic

Iawonic	Homeric		Mycenaean		Arcado-Cyprian		Aiwolic
	Iaw. (25)	Aiw. (15)	Iaw. (17)	Aiw. (17)	Iaw. (13)	Aiw. (14)	
<i>a</i>	<i>a</i>	& <i>o</i>	<i>a</i>	& <i>o</i>	<i>a</i>	& <i>o</i>	<i>o</i>
<i>π-</i>	<i>π-</i>	& <i>πτ-</i>		<i>pt-</i>		<i>πτ-</i>	<i>πτ-</i>
<i>-τωια</i>		<i>-τειοα</i>	<i>-tr(i)ja</i>	& <i>-tera</i>			<i>-τεροα</i>
<i>ἱεροός</i>	<i>ἱεροός</i>		<i>ijero(s)</i>		<i>ἱεροός</i>		<i>ἱοος</i>
<i>-οο</i>	<i>-οο</i>	& <i>-οιο</i>		<i>-ojo</i>			<i>-οιο</i>
<i>-σι</i>	<i>-σι</i>	& <i>-εσσι</i>	<i>-si</i>		<i>-σι</i>	& <i>-εσσι</i>	<i>-εσσι</i>
		<i>-γι</i>		<i>-phi</i>		<i>-φι?</i>	<i>-γι</i>
<i>(-οιν)</i>	<i>-οιν</i>		<i>-o(i)i(n)</i>		<i>-οιν</i>		<i>-οιν</i>
<i>μιν</i>	<i>μιν</i>		<i>mi(n)</i>				<i>μιν</i>
<i>οί</i>	<i>οί</i>	& <i>τοί</i>			<i>οί</i>		<i>τοί, οί</i>
<i>(τοτο)</i>			<i>toto</i>				
<i>ὄδε</i>	<i>ὄδε</i>		<i>ode? tosode</i>	& <i>onu? tosone</i>	<i>ὄδε</i>	& <i>ὄν</i>	<i>ὄνε, τόνε</i>
<i>μία</i>	<i>μία</i>	& <i>ῖα</i>	<i>(eme</i>	& <i>ijo?)</i>	<i>μία</i>		<i>ῖα</i>
<i>-εω</i>	<i>-εω</i>	& <i>-ημι</i>	<i>-e(o)</i>	& <i>tereja</i>		<i>-ημι</i>	<i>-ημι</i>
<i>-(ν)ται</i>	<i>-(ν)ται</i>			<i>-(n)to(i)</i>		<i>-(ν)τοι</i>	<i>-(ν)τοι ? (ν)ται</i>
<i>-σ(σ)-</i>	<i>-σ(σ)-</i>	& <i>-ζ-</i>			<i>-σ(σ)</i>	& <i>-ζ-</i>	<i>-ζ- (-οο-)</i>
<i>-ναι</i>	<i>-ναι</i>	& <i>-μεν</i>	<i>-na(i)</i>	& <i>-me(n)</i>	<i>-ναι</i>		<i>-μεν(αι)</i>
<i>-(κ)ώς</i>	<i>-ώς</i>	& <i>-ων</i>					<i>-(κ)ων</i>
gen. <i>(-δα-)</i>	<i>(-δης)</i>	& <i>-ιος</i>		<i>-ijo(s)</i>			<i>-ιος</i>
<i>-ε(ι)ος</i>	<i>-ε(ι)ος</i>		<i>-e(j)o(s)</i>	& <i>-(i)j)o(s)</i>			<i>-ιος, -(ι)ος</i>
<i>ἀπό</i>	<i>ἀπό</i>			<i>apu</i>		<i>ἀπύ</i>	<i>ἀπύ</i>
<i>ἀνά</i>	<i>ἀνά</i>		<i>an-</i>	& <i>o(n)-??</i>	<i>ἀν-</i>	& <i>ὀν</i>	<i>ὀν</i>
<i>μετά</i>	<i>μετά</i>		<i>meta</i>	& <i>peda</i>	<i>μετά</i>	& <i>πεδά</i>	<i>πεδά</i>
<i>ξ/ούν</i>	<i>ξ/ούν</i>		<i>ksu-(su-?)</i>			<i>όν</i>	<i>όν</i>
<i>ὄτε</i>	<i>ὄτε</i>		<i>ote</i>	& <i>oda?</i>	<i>ὄτε</i>		<i>ὄτα</i>
<i>εἶ</i>	<i>εἶ</i>				<i>εἶ</i>		<i>αἶ</i>
<i>ἄν</i>	<i>ἄν</i>	& <i>νε</i>			<i>ἄν</i>	& <i>νε</i>	<i>νε</i>
<i>ἐλεῖν</i>	<i>ἐλεῖν</i>	& <i>ἀγρεῖν</i>	<i>eree(n)</i>	& <i>agre-</i>			<i>ἀγρε(ω)</i>

Of 24 (28) specific features 22 (25) Homeric forms have correspondences in Iawonic and 14 (15) in Aiwolic; for Mycenaean these figures are 14 and 13 (17 and 17) respectively; and for Arcado-Cyprian and Pamphylian the figures are 12 and 11 (13 and 13). The differences are due to the fact that Homeric is better known than Mycenaean and Arcado-Cyprian, and also due to the late Ionic (and Attic) influence on Homeric.

Mycenaean and Homeric have numerous peculiarities in common:

The double treatment of the IE syllabic nasals and liquids.

Gen. sing. in *-οιο*.

A case form in *-φι*.

The pronoun *μιν*.

Facultative augment.

Infinitives in *-ναι* and *-μεν*.

Frequent use of personal names in *-εύς*.

Myc. *posedao, posidaijo*=Hom. *Ποσειδάων, Ποσιδήμος*.

The verbs *ἐλεῖν* (*αἰρεῖν*) and *ἀγρεῖν*.

Formation of the adjectives Myc. *wanak-tero(s)* and Hom. *βασιλεύ-τερος*.

Adjectives in *-went-* are very characteristic of Mycenaean and Homeric, cf. Myc. *wodowe* OLEUM=Hom. *ροδέν* *ἐλαιον*.

Moreover, numerous typically Homeric words and personal names appear in Mycenaean. Chadwick's article (1958b) entitled "Mycenaean Elements in the Homeric Dialect" clearly shows the great number of Homeric words in the Mycenaean texts. Several specialists have stressed the fact that Mycenaean and Homeric have many elements in common.⁴⁵ All these facts are given in detail in my article Georgiev 1961a.

This leads to the conclusion that **Mycenaean and Homeric represent a mixture of Ionic and Aeolic elements and that they are closely related**, i. e., they have a close genetic relationship.

Mycenaean is furthermore closely related to Arcado-Cyprian. This becomes clear from the linguistic data given above as well as from the fact that Arcadian was the pre-Doric dialect in the Peloponnesus, i. e., in the region where Mycenaean was spoken.

3.1.5. The Mixture of Iawonic and Aiwolic

On the basis of all these facts the following conclusions can be drawn about the genetic relations of the Greek dialects and about the ethnogenesis of the Greeks in general.

At the beginning of the second millennium B. C. the Greek language was divided into three main dialects: Northwest Greek (Proto-Doric), Aiwolic=Proto-Aeolic and Iawonic=Proto-Ionic. During the first half of the second millennium B. C. the Greeks inhabited the entire territory of Greece and were distributed as follows: Proto-Dorians inhabited northwest Greece, Aiwolians inhabited northeast and part of central Greece (Thessaly, Phocis, west Boeotia, northwest Locris, Aetolia, and south Acarnania), and Iawonians inhabited Attica, Euboeia, southeast Boeotia, and the Peloponnesus.

It was Kretschmer (1907; 1927: 75-77) who launched the theory that the Proto-Ionians (=Iawonians) had formerly inhabited the entire territory of southern Greece, where they were the oldest Greek stratum. Later (about the middle of the 2nd millennium B. C.) "Achaean" (=Aiwolians)⁴⁶ coming from the north occupied this region, partly driving out and partly assimilating the Proto-Ionians. Kretschmer's theory that in the Peloponnesus Aeolians (Proto-Aeolians) superimposed themselves on an older Ionic (Proto-Ionic)-speaking population is accepted by almost all the specialists. Recently Tovar (1944; 1957) supported it with new linguistic arguments.

Important archaeological investigations in recent years, such as those by Blegen (1959a, b) and McDonald and Simpson (1961), confirmed this linguistic theory archaeologically. Blegen arrived at the following conclusion: "During the last twenty-five or thirty years explorations in southwestern Peloponnesus have revealed numerous hitherto unknown Mycenaean settlements and cemeteries. In particular the coastal region extending southward from the Alpheios River to Methone and continuing eastward and northward around the Messenian Peninsula has yielded evidence suggesting a fairly dense occupation in the Late Bronze Age. This is just the district in which ancient Greek tradition placed the realm of the Neleids, where King

⁴⁵ See Ventris and Chadwick 1956:104-105; Webster 1955; 1958: 91-93, 136-138, 159-211, 284-286; Alsen 1959.

⁴⁶ Cf. Strabo VIII, 1: *Ἀχαιοὶν, Αἰολικῶν ἔθνος*.

Nestor ruled over nine cities. These latter had in earlier times apparently been independent little states, each under its own kinglet or princeling until they were conquered and subjugated by Neleus, the father of Nestor and founder of the dynasty, who came as an invader from Thessaly, established a strong central authority and built himself a suitable palace."

Consequently, the older population in west Peloponnesus, which inhabited this area during the 2nd millennium B. C. was conquered or driven out by newcomers from Thessaly. The newcomers, who came towards the middle of the 2nd millennium B. C. (at the time of the Mycenaean civilization), undoubtedly were "Aiwolians" (=Proto-Aeolians). The population of the formerly "independent little states" was lawonic (=Proto-Ionians).

There is also another important fact which confirms the priority of the lawonians in south Greece, namely, the specific character of the place names which appear in the Mycenaean texts. About 200 toponyms are attested in these texts. All of the Mycenaean toponyms whose etymology is certain or very probable show the specific features of lawonic and not of Aiwolic.

The best example is the place name from the Pylos tablet An 65.12 *erapo rimene* = Ἐράρω(ν) λιμένε(ι) gen. pl. from **elub^ho-s*, cf. Ἐλαφος, a brook in Arcadia, Ἐλάρω λιμνί on Crete. Cf. the appellatives: *erapija* (PY) = ἐλάφια(ι) διφθέρου 'stag's hides' (cf. Lang 1958:191) together with the Aiwolic form *eropaketa-* (MY) = ἐλοφ-αγέτα- 'deer hunter', *eropakeu* (KN), a man's name (?), *eropakeja* (KN), an adjective describing tunics (cf. Ventris and Chadwick 1956:393) with *o* from *u*.

The following are similar examples of place names:

karadoro (PY), one of the nine towns, = Χάραδρος, χάραδρος, χαράδρα 'mountain-stream, torrent; gully, ravine' from PIE **g^hrdro-*, cf. Boisacq 1923, s. v.

erato(de), *eratei* (loc.), *erateijo* (PY), one of the nine towns, = Ἐλατος, cf. ἐλάτη 'silver fir, *Abbies cephalonica*' from **elptā* (?), cf. Frisk 1954-70, s. v.

keijakarana, *zeijakarana* (PY) with *-krana* = (?) Att. κοίτη 'well, spring, fountain' (cf. Ventris and Chadwick 1956:148) from **k^rsnā* (?), cf. Frisk 1954-70, s. v.

rijo (PY), one of the nine towns, = ῥίον, i. e., ῥίον 'peck, headland' (cf. Ventris and Chadwick 1956:149) from **wriso-m*, cf. Boisacq 1923, s. v. The lack of initial *w* is an lawonic feature. The beginnings of the disappearance of *w* in some positions (as in Homeric) started in lawonic around the 14th century B. C. This process went on for three or four centuries until *w* in Ionic-Attic completely disappeared at the beginning of the 1st millennium B. C.

Therefore evolution of the Greek language during the 2nd millennium developed along the following basic lines. Aiwolians (probably Achaeans coming from the area which later was called Achaia Phthiotis=south Thessaly) superimposed themselves on the lawonians in south Greece (the Peloponnesus). Then, during the 14th-12th centuries B. C. a mixed lawonic-Aiwolic dialect arose in the Peloponnesus (and in Crete): this is the "Achaiwian" (Proto-Achaean) or the Mycenaean koiné.

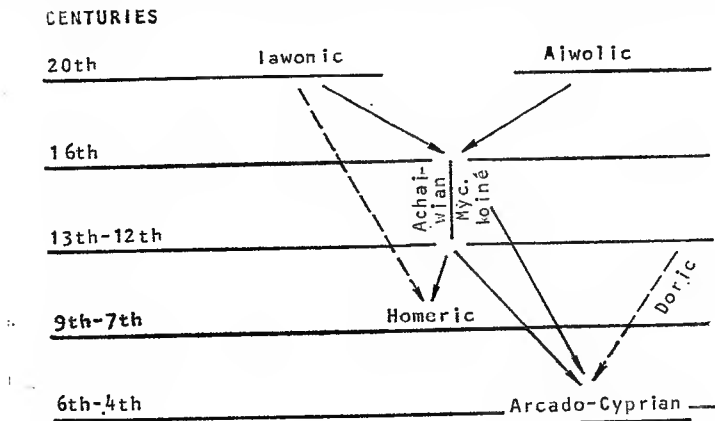
Homeric and Arcado-Cyprian descend directly from the Mycenaean koiné in the 2nd millennium B. C. It has been known for a long time that the genealogy of Greek epic poetry goes back to the Mycenaean period.

Parry and his followers Page (1959: 222-224, 297-299) and Lord (1960: 3-7, 141-145), who have developed Parry's theory, have demonstrated what traditional oral poetry was, and how the *Iliad* and *Odyssey* took shape and were transferred from generation to generation of rhapsodes, the most eminent of them being Homer. The *Iliad* and the *Odyssey* were the final product of a continuous development over a very long period of time. Homeric represents the last stage of the Mycenaean dialect as it was preserved in the oral poetry of the rhapsodes, but subjected to a strong Ionian and later Attic influence between the 9th and 7th centuries B. C.

During the Mycenaean period (at the time of its greatest glory) Achaiwians colonized some parts of Cyprus and Pamphylia and a great number of immigrants settled there after the fall of the Mycenaean civilization in the Peloponnesus (and Crete). Thus arose the Cyprian and the Pamphylian dialects, which were spoken from the 6th to the 4th centuries B. C., when the influence of Doric had already begun. In Arcadia this influence began much earlier.

The specific evolution of Homeric and Arcado-Cyprian in the post-Mycenaean period was the cause of some of the differences between the two. A general impression of this development is presented in the scheme shown in Table 4.

Table 4
The Evolution of Homeric and Arcado-Cyprian in the Post-Mycenaean Period



Considering these dialects from this point of view one can easily explain the double forms — Ionic and Aeolic in Mycenaean, Homeric, and Arcado-Cyprian — as well as the close relationship between Mycenaean and Homeric, Mycenaean and Arcado-Cyprian, Homeric and Arcado-Cyprian, and also some of the differences among them.

3.1.6. Characteristic Features of the Mycenaean Koiné

Another important problem is the reflection of the specific Mycenaean features on the orthography of the Mycenaean texts.

Ventris and Chadwick determined the following as "orthographic conventions" or "spelling rules": the lack of the final consonants *v*, *q*, *σ*, *l* (*pome* = Att. ποιμήν, *pate* = Att. πατήρ, *puro* = Att. Πύλος, *damo* dat. = Att. δήμῳ) and the lack of *v*, *μ*, *q*, *λ*, *σ*, *l* before a consonant (*pate* = πάντες, *api* = Att. ἀμφί, *pakana* = Att. γάσπανα, *akuro* = Att. ἄγυρος, *kako* = Att. καλώς). But this assumption does not explain the cases described below.

(1) *dosomo* (PY) = δοσμός(ς), which is found 61 times in 16 different tablets: if the final *s* was pronounced but was not written due to "orthographic" conventions it is strange that there are no deviations in writing whatsoever. Cf. also *desomo* (KN) = δεσμός(ς), *kosamato* (KN, PY) = κοσμάτω(ρ), *wisowo-* (PY) = *FioFo-*, *aikasama* (PY) = *aiξμά*, Att. αἰχμή, *dakasanata* (PY) = **Ja(q)ḡnāta(ς)*, cf. Gortynian δαρχνά, Att. δραχμή, *isukuwodoto* (KN) = Ἰσχυφόδοτο(ς).

(2) *werekarata* (PY) = *Fεργ-αλάτᾱ(ς)*; *wreke* (PY) = ? Att. εἶργει; *worokijonejo* (PY) = **Fοργμωνειω-*; *araroniofemeno*, -a (KN often) = ἀραρμιο(σ?)τιμένο(ς), -να.

(3) *perusinwa* (KN), cf. *perusinwwo* (PY) = *περυνωFo-*.

(4) *misarajo* (KN 841.4) probably = *Mισραῖο(ς)*, cf. *Msr* 'Egypt'.

These examples, like the entire Mycenaean graphic system in general, show that all (clearly) pronounced phonemes were written, while those not recorded graphically were in fact not pronounced or were pronounced very weakly, as for instance *r* before a consonant or in final position in English.

Some Greek endings such as -ον from -om, -ων from -ōn and -ōm (cf. *χθόν* from **g^hd^hōm*) show that in Proto-Greek there were *sandhi* rules almost like those in Sanskrit. In the (late) Greek dialects, however, the form of the ending before dentals was generalized. Various Greek dialects attest the disappearance of final -ς, -ν, -λ.

The lack of final consonants in the Mycenaean texts attests the actual pronunciation. It reflects the most ancient stage of Greek, when there were *sandhi* rules almost like those in Sanskrit.⁴⁷

Final *s*. In Sanskrit the final *s* disappeared before vowels, voiced consonants and *r*, but it changed into *h* before voiceless consonants: IE -os > Skt -a, -o, -a^h.⁴⁸ The situation was almost the same in Mycenaean. For this reason we find forms such as *puro* (PY) = Att. Πύλος, *dosomo* (PY) = δοσμός(ς), etc. in Mycenaean.

Final *n* (*m*). In Sanskrit the final *m* before a consonant became -*n̄* (weak nasalization of the preceding vowel). In contemporary Bulgarian (a Balkan language) *n* before a consonant and in final position changed into nasalization of the preceding vowel. In various Greek dialects (and in Latin) the final *n* (*m*) disappeared at different periods. The situation in Mycenaean was similar: -*n* (-*m*) before a consonant changed into a (weak)

⁴⁷ See Rosenkranz 1959: 15-16; Strunk 1961: 155-8.

⁴⁸ Final *s* disappeared in Lycian and in the language of the bilingual inscription of Side, cf. Pedersen 1945: 15, 21; for the same peculiarity in Cyprian as well see p. 85.

nasalization of the preceding vowel which was not expressed graphically. But in some cases the final *-n* (in the *n*-stems) was restored under the influence of the oblique cases, cf. PY An 18.2.7 *tekotonape* = τέκτων ἀπῆ(ς) (Att. ἀπ-ῆν) together with PY An 5.1.5 *tekotoape* = τέκτω ἀπῆ(ς); PY An 724.5 *ekera₂wone apeeke* = ἘχελιάFων ἀπέηκε together with PY Un 718 *ekera₂wo dose* = ἘχελιάFω δόσε(ι).

Final *r* (*n*). In Indo-Iranian, Balto-Slavic, and Macedonian the stems in *-r* and *-n* (*-m*) end in a vowel in the nom.: Skt. *mātā*, Lith. *mótė*, Mac. *āđḥ* = Gr. αἰθῆρ. On the basis of the archaic Homeric form δῶ from *dō(*m*) = Att. δόμα from *domḥ one can conclude that the lack of the final *r* in Indo-Iranian, Balto-Slavic, and Macedonian reflects a specific feature of common IE and that the same had happened in Proto-Greek, but that later, under the influence of the oblique cases, *-o* and *-u* were introduced in the nominative as well. Thus the Mycenaean forms *pate* = Skt. *pitā*, *mate* = Skt. *mātā*, *tekoto* = Skt. *takṣā*, etc., have preserved the old form. However, a (generalized) *sandhi* is also quite possible. In Sanskrit the ending *-r* changed into *-ḥ* before a voiceless consonant.

Final *y*. According to the *sandhi* rules *-i* (= *y*) in Sanskrit disappeared before vowels (*-āi* > *-ā*, *-e* > *-a*). A similar phenomenon is attested in Cyprian; moreover, throughout the history of the Greek language the long diphthongs were monophthongized (*-ωι* > *-ω* > *-o*, etc.). Similar causes have determined the lack of the final *-x* in the Mycenaean inscriptions, cf. *damo* = Att. δῆμω dat. However, the Mycenaean endings of the nom. pl. *-o*, *-a* probably were derived from IE *-ōs* and *-ās* (the endings *-oi*, *-ai* were transferred from the pronominal declension).

The consonants *σ*, *μ*, *ν*, *ρ*, *λ*, *ξ* in initial and in middle position. As was shown above, Mycenaean is a specific Greek dialect. Certain specific phonematic changes took place in Mycenaean; the following examples confirm this: *popi* (PY) = πο(π)φί 'ποσί' dat. pl. of ποδ-: if this word were pronounced *ποδφι it would have been written *po-di-pi; *wepeza* (PY) = Fé(π)πεζα from *Fεσπεζα. Similar changes are found in Homeric and in other dialects, cf. Hom. κἄλπεσε = Att. κατέπεσε.

σ-, *-σ*-: in different Greek dialects the consonant clusters σκ, σπ, στ, σχ, σφ, σθ, σγ, σF were assimilated, cf. Cret., Boeot. σπ, σθ > ττ, τθ, θθ, θ; Lac. σκ > κκ, στ > ττ, σχ > κχ; Tsakonian (a Modern Greek dialect) σπ > p^c, στ > t^c; Cret. σγ > γγ; common Gr. σF > FF; etc. A similar change took place in Mycenaean (or only in Cretan-Termilian, on the basis of which the syllabic writing appeared), cf. Cret. Θεναί = στεναί (see section 5.4). Thus σ in cases such as *peta* = Att. σπέσμα, *watu* = Att. ἄστυ, *tatomo* = Att. σταθμός actually did not exist; σπ, στ shifted into (π)φ, (τ)θ. Where *s* was written it was actually pronounced: *dosomo* (PY) = δοσομός(ς), *aikasama* (PY) = αἰξιμή, Att. αἰχμή; in *sapakaterija* (KN) = Σφακτηρίδα, the written form reflected a dialectal name in which σφ- was preserved.

-ν-, *-μ*-: in Mycenaean the nasal before a consonant shifted into a weak nasalization of the preceding vowel (or disappeared). Examples of this change are found in some of the late dialects, cf. Pamphylian πέδε = Att. πέντε, Cret. ποππῆ = Att. πομπή, etc.

-ρ-, *-λ*-: the articulation of the phonemes ρ and λ before a consonant (especially a voiceless one) was very weak. English offers examples of such a pronunciation of *r* and *l*: *card*, *palm*. Furthermore in the Cretan dialect

(of the classic period) the form *καυχός* = Att. *χαλκός* is attested. In Mycenaean in some cases there was a full assimilation of the phonemes *q*, *l* after the following consonant.

k: the second element of the diphthong *au* (and *oi*) was clearly pronounced in initial syllables and consequently was almost always written in initial syllables. In middle and final position the second element of this diphthong was pronounced weakly and therefore it was usually not written. The diphthong *eu* probably was always monophthongized (*ē*). In cases such as *korete* = Att. *κοιρητήρ* from *-qk-*, *kotona* (PY) = Att. *κοῖνα* from **kṵwŋlā* (?), etc., probably *-or-*, *-on-* should be transcribed *-oq(q)-*, *-ow(v)-*.

From the above the following conclusion can be drawn:

The system of the Mycenaean syllabic writing was borrowed from the Cretans (= Termilians) on the basis of whose language the writing had been created. The Greeks have adapted it to a certain degree to the peculiarities of their language. It is considerably simpler than the Egyptian, Assyro-Babylonian, and Hittite writing systems of the same period.

The writing rules are the following: (1) all phonemes are written with the exception of some weakly articulated ones (*h*?, *-q-*, *-l-*, *-k-* before consonants, nazalization?); (2) economy of syllabic signs; (a) similar phonemes are marked by the same sign (*ta/ða*, *qa/la*,⁴⁹ etc.); (b) consonant clusters are marked according to the principle of epenthesis: *doromeu* (PY) = *Δρομεύ(s)* or *Δορομεύ(s)*, cf. Att. (inscription) *Ἐπι-δορομος* = *Ἐπί-δρομος*, Cret. *ἀκαρά* = Att. *ἄκρα*, Cyp. *καρραῖον* = *κράζον*.

3.1.7. Correspondences in Other Greek Dialects

The specific features of Mycenaean phonology are confirmed by Homeric and by other Greek dialects.

3.1.7.1. Hom. *δῶ*

In the *Iliad* and the *Odyssey* we find the archaic word *δῶ* 'home' (once in the nominative and 22 times in the accusative), often at the end of the stanza, which in Homer is a position where archaisms usually are found. This word comes from IE **dō(m)* and corresponds exactly to Arm. *tun* 'house' from **dōm*, Av. *dam* loc. 'at home' from **dom*. The lack of the final nasal, however, creates difficulties since if one compares this word with words such as *χθών* 'earth' from **g^hd^hōm*, *χιών* 'snow' from **g^hiōm*, *κύων* 'dog', *ποιμήν* 'herdsman', one would expect **δών*.

Hom. *δῶ* is exactly the form that one would expect as normal in a Mycenaean inscription. It is attested in the Mycenaean inscriptions as *dode* (TH) = *δῶ-δε*.

In many IE languages the stems in *-n*, *-m*, *-r* appear in nominative singular without a final consonant, cf. Skt. *ś(u)ṛā* 'dog', *pitā* 'father', Lith. *šuo* 'dog', *motė* 'mother', Mac. *ἄδῆ* = Gr. *αἰθήρ*, L. *homo* 'man', Goth. *guma* 'man', OIr. *cū* 'dog', etc. This is an archaic IE specific feature.

⁴⁹ In some modern Cretan dialects *l* appears as *r*: this shift could be very ancient.

Thus Hom. δῶ is preserved as an archaism from an older stage of the Greek language, while forms such as χθών, πατήρ are innovations in which the final consonant was introduced under the influence of the oblique cases.

3.1.7.2. Hom. ἰχώρ, ἰχῶ

Hom. ἰχώρ 'blood of the gods' is an archaic religious term found twice in the *Iliad*, once in nom. sing. ἰχώρ and once in acc. sing. ἰχῶ. The second form, about which different suggestions have been made, is still not clear. The text in which this word is found is as follows:

Iliad V, 340: ἰχώρ, οἷος πέρ τε ῥέει μακάρεσσι θεοῖσιν

Iliad V, 416: ... ἀπ' ἰχῶ χειρὸς διμόρῃν

In its first appearance ἰχώρ is before a vowel, in the second it is before a consonant. We find the same situation as in Mycenaean *ekera₂wo dose* (PY Un 718.2-3) = *E₂ke₂l₂áF₂ω δώσε(ι) and *ekera₂wone apeeke* (PY An 724.5) = *E₂ke₂l₂áF₂ων ἀπέηκε, *tekotonape* (PY An 18.7) = τέκτων ἀπῆ(ς) and the "incorrect" form *tekotoape* (PY An 5.1-5) = τέκτω ἀπῆ(ς).

In the Mycenaean texts ἰχώρ, οἷος and ἰχῶ χειρὸς would have been written "correctly" as *ikorojo and *iko kero, i. e., exactly as in the *Iliad*.

The etymology of ἰχώρ is known; it is a borrowing from the pre-Greek IE word *ishō(r) or *eshō(r) which corresponds to Hitt. *ishar*, *eeshar* from PIE *esh₂r (r/n-stem), Skt. *asṛk* n., Gr. *ἔαρ* n., L. *as(s)er* n., Toch. AB *ysār*, Lett. *asins* 'blood'. Hom. ἰχώρ originally was neuter, but later, due to its unclear origin, it was connected with ὀπός m. 'juice'. This is obvious from the meaning given to the word, cf. Liddell and Scott 1953, s. v.: "... The juice, not blood that flows in the veins of gods... later simply, blood... the watery part of animal juices, serum... of blood." This meaning indeed corresponds to the meaning in classical Greek, through which this rare word of unclear origin was preserved only as an archaism and was connected with ὀπός m. 'juice'; but its original meaning was 'blood'.

By substitution of the foreign phoneme *h* with *χ* this word was borrowed in a Greek dialect (probably Cretan) in which σ_χ (and σ_κ) changed into κ_χ (= χ_χ: Cret., Lac.): pre-Gr. *ishō(r) first became *ισχώρ and then became *ικχώρ; ἰχώρ in the *Iliad* (and in some Greek authors) is an incorrect way of writing *ικχώρ.

Therefore Hom. ἰχώρ, ἰχῶ is an example not only of the interpretation of final consonants in the Mycenaean texts, but also of the lack of σ before a consonant in Mycenaean.

The writing of *k* instead of the classical σ_κ in the Mycenaean texts, for instance *kere₂a₂* (PY Ta 641.1) = (σ)κέλεα, is not an "orthographic convention" but indicates the actual pronunciation since in the Mycenaean dialect (or at least in the Cretan dialect) the cluster σ_κ changed into (κ)χ, cf. σ_χ > κ_χ, σ_γ > γ_γ (or γ), σ_τ > τ_τ, τ_θ, θ, σ_π > (π)φ in various Greek dialects.

3.1.7.3. Hom. *κνκε(ι)ῶ*

In the *Iliad* and the *Odyssey* there are other words with this sort of specific features, as for instance *κνκειῶ*, *κνκειῶ* 'potion, posset containing barley-groats, grated cheese, and wine (also honey and magical drugs); mixture'. This word is found four times in the *Iliad* and the *Odyssey* in accusative singular, three times before a consonant and once before *F* (which had disappeared, cf. *ῥύς* = Skt. *vasu-*):

Iliad XI 624 τοῖσι δὲ τεῦχε κνκειῶ ἐνπλόκαμος Ἐκαμήδη.

Odyssey XI 641 ... ἐπεὶ ῥ' ὄπλισσε κνκειῶ / τῷ δ' ...

Odyssey X 290 τεύξει τοι κνκειῶ, βαλέει δ' ἐν φάρμῳ σίτω.

Odyssey X 316 τεύχε δέ μοι κνκειῶ χροσέει δέπαι, ῥφρα πίοιμι.

The gender of the word cannot be established from these excerpts. At a later period it is found in accusative singular in the form *κνκειῶν* (Hippocr., Ar., Plato) and also in one inscription from Epidaurus in the form (Dor.) *κνκᾶν*, gen. *κνκᾶνος*.

Κνκε(ι)ῶ is a derivative from the verb *κνκάω* 'to mix': its original meaning was 'mixture'. But the meaning 'mixture' for the form *κνκειῶν*, -ῶνος m., which is given in the dictionaries is not clear. The Greek words ending in -ων, -ωνος can be classified according to their meaning into three clearly distinguished groups: (1) 'mit dem Grundwort als Merkmal' (type *στροφῶν* from *στροφός*); (2) 'als Bezeichnung der Stelle, des Ortes, wo es etwas in Plural gibt' (type *μυόν* 'Muskelnhäufung') and 'als Standortbezeichnungen' (type *ἀνδρῶν* and *ἀνδρεῶν* 'men's apartment in a house'); (3) a small group such as *πρῶν* 'saw', *ἀρηγῶν* 'helper', *εἰκῶν* 'likeness, image'.⁵⁰ The meaning 'mixture', as in a derivative of 'to mix', does not fit into any of these groups.

The word *κνκε(ι)ῶ* meaning 'mixture', which is a derivative from the verb *κνκάω* 'to mix', becomes clear if it is an *r/n*-stem, i. e., **κνκε(ι)ωρ*, cf. *ῥδ-ωρ* 'water', *ῥλωρ* 'spoils, prey' from *ῥλεῖν* 'to take, grasp', *ῥέλωρ*, *ῥλδωρ* 'wish, longing, desire' from *ῥέλωμαι*, *ῥλδομαι* 'wish, long', *τέκμωρ*, *τέκμωρ* 'limit, boundary; goal, end', *ἀχῶρ* 'scurf, dandruff', *σκῶρ* (Dor. *σκῶρ*) 'dung, ordure'.

Therefore, *κνκε(ι)ῶ* is the neuter singular of an *r/n*-stem and comes from **κνκᾶ-ω(ρ)*; the correct form for gen. sing. *κνκᾶνος* is attested in the inscription from Epidaurus. The late form is transformed after nom. *κνκειῶ*, gen. *κνκᾶνος* and after the nouns in -ῶν.

3.1.7.4. Hesiod. *ἄλειφω*

In Hesiodus and in some later texts the form *ἄλειφα* = Att. *ἄλειφαρ* 'ointment' is attested: Hesiod. *Theog.* 533 (var. -αρ); Theocr. 7, 147 (var. -αρ); and two inscriptions from Miletus from the 6th century B.C.⁵¹ The form *ἄλειφα* is identical with Myc. *arepa*.

⁵⁰ Cf. Schwyzer 1934-39: 486-487.

⁵¹ Cf. Schwyzer 1934-39: 516.

3.1.7.5. Cypr. δ $\chi\alpha\mu\epsilon\upsilon F \delta$

In a Cyprian inscription from the classical period we find two of the most typical features of the Mycenaean writing: the lack of final s and of λ before a consonant. The inscription is as follows:⁵²

o-ka-ke-u-vo-ta-se-va-na-[sa-se] = δ $\chi\alpha\mu\epsilon\upsilon F \delta$ $\tau\acute{\alpha}s$ $F\alpha\nu\acute{\alpha}[σας]$

F between $-ev$ and the article δ (= Att. δ) means that the final s has actually disappeared (between vowels in *sandhi*). This example shows that an explanation by means of the "orthographic convention" is not possible: what we have here is a phonetic peculiarity. The same applies to λ before a consonant: Cypr. *kakeu*⁵³ = Myc. *kakeu* (KN, PY) = Att. $\chi\alpha\lambda\mu\acute{\epsilon}\upsilonς$.

This example shows that the lack of final s in the Mycenaean texts is due to the principles of *sandhi* which were inherited from IE. The change in *sandhi* of the final s in Mycenaean was generalized after cases such as vowel + s before a nasal, a liquid, a dental, a F , etc. The Greek dialects of the classical period offer numerous examples of this phenomenon, as for instance:⁵⁴

(a) vowel + s before a vowel (i. e., between two vowels): Cypr. $\chi\alpha\mu\epsilon\upsilon F \delta$ = Att. $\chi\alpha\lambda\mu\epsilon\upsilonς \delta$, Cypr. $\tau\acute{\alpha} \epsilon\chi\acute{\epsilon}\rho\delta\upsilon\upsilon$ = $\tau\acute{\alpha}s \epsilon\chi\acute{\epsilon}\rho\omega\upsilon$, etc.

(b) vowel + s before a nasal: Delphian $\tau\omega\upsilon\upsilon\upsilon \nu\acute{o}\mu\omicron\nu\varsigma$, Cypr. $F\acute{\epsilon}\pi\omicron \mu\acute{\epsilon}\gamma\alpha$.

(c) vowel + s before a liquid: Cret. $\tau\acute{\iota}\lambda \lambda\acute{\epsilon}\iota$, Lac. $\tau\omicron\tau \Delta\alpha\kappa\epsilon\delta\alpha\mu\omicron\nu\omicron\iota\omicron\varsigma$.

(d) vowel + s before a dental: Cret. $\pi\alpha\tau\rho\acute{o}\delta \delta\acute{o}\nu\tau\omicron\varsigma$, $\tau\acute{\alpha} \delta\acute{\iota}\kappa\alpha\varsigma$ Rhodian $Z\epsilon\iota\delta \acute{\epsilon}$, Arc. $\tau\acute{\alpha} \delta\acute{\epsilon}$ = $\tau\acute{\alpha}s \delta\acute{\epsilon}$, Cret. $\tau\acute{\alpha}\theta \theta\upsilon\nu\gamma\alpha\tau\acute{\epsilon}\rho\alpha\varsigma$.

(e) vowel + s before an F : Cypr. $\tau\acute{\alpha} F\alpha\nu\acute{\alpha}\sigma\alpha\varsigma$, Arc. $\kappa\acute{\alpha} F\omicron\upsilon\lambda\iota\alpha\varsigma$.

The final s has completely disappeared in the Mycenaean texts. It is assumed that it has been preserved in one word, but the interpretation of this word is not very reliable. The two texts in which this word is found are:

KN Ch 897 JO *tomako wonogosoqe* BOS ze 1

KN Ch 1015 NO *wonogoso tomakoqe*

Furumark (1954: 48) and Chadwick (1954: 3) interpret *wonogoso* as $Fo(\tau)\nu\omicron\kappa^w\varsigma$ = Hom. $\omicron\iota\rho\omega\psi$ which is probably the name of a bull or an ox, as can be seen from the ideogram. This interpretation is plausible because it is supported by a passage in the *Iliad* (XIII, 703) in which $\omicron\iota\rho\omega\psi$ is used as an epithet for oxen. The written form of *wonogosoqe*, however, shows that *wonogoso* must be read $Fo(i)\nu\omicron\kappa^w\sigma\omicron(s)$ (or $-\nu\omega$ ⁵⁵) since if this word must be read in the first inscription as $Fo(i)\nu\omicron\kappa^w\varsigma \kappa^w\epsilon$ it would have been written *wonogeseqe* according to the rules of Mycenaean (and the Cyprian) orthography.⁵⁶ The interpretation of the meaning of the word remains the same in both cases since IE $*ok^w$ - 'eye' also appears as an s -stem, cf. Skt. *akṣ-i* 'eye', Av. *aš-i* dual '(two) eyes', Skt. *akṣa-hi* 'dice' (literally 'with

⁵² Cf. Hoffmann 1891-98: no. 110; Lurja 1957b: 34.

⁵³ Cf. also Cypr. *okakeue* [...] (Hoffmann 1891-98: no. 99) = δ $\chi\alpha\mu\epsilon\upsilon \acute{\epsilon}[\dots]\epsilon$; probably $\chi\alpha\lambda\mu\epsilon\upsilonς > \chi\alpha\upsilon\mu\epsilon\upsilonς$ (cf. Cret. $\kappa\alpha\upsilon\chi\acute{o}\varsigma$ = Att. $\chi\alpha\lambda\chi\acute{o}\varsigma$) from which $\chi\alpha\mu\epsilon\upsilon$ through dissimilation and the stem $\chi\alpha\mu-$ was transferred into Myc. *kako* = $\chi\alpha\lambda\mu\acute{o}\varsigma$.

⁵⁴ Cf. Buck 1955: 82-83.

⁵⁵ Cf. Lurja 1957a: 79-80.

⁵⁶ The combination of two consonants in the syllabic writing is expressed by two signs which signify the vowel which follows, cf. *tekotone* = $\tau\acute{\epsilon}\kappa\omicron\tau\omicron\nu\epsilon(s)$, *kupirijo* = $K\acute{\upsilon}\pi\omicron\iota\kappa\omicron(s)$. Petruševski 1962 and Lejeune 1963 read $Fo(i)\nu\omicron\kappa^w\sigma\omicron(q)\sigma\omicron-$.

eyes'), OBG *oko* 'eye', gen. *očese* from **okwes-* etc., of *χαρ-οπός* together 'with *χάρ-οψ* 'bright eye', *Χάρ-οπος* and *Χάρ-οψ, μελαν-ωπός* (*Μελάν-ωπος*) 'with dark eyes', *Ἀστέρ-ωπος*, etc.

3.1.7.6. The Lack of Final *ν*

Two different problems are involved in the lack of final *ν*. The first is the lack of the final nasal or liquid of *n-* and *r-*stems, which was already explained. We must now analyse the lack of final *ν* in some specific cases: in verbal endings, in the preposition *ἐν*, etc.

The final *ν* in the substantival and verbal endings derived from *-m* is explained as being a generalization of one position of *sandhi*, i. e., *n* before a dental. This phenomenon can be considered typical of common Greek. In the different Greek dialects, however, several modifications according to *sandhi* are found, for instance:

(a) before *σ*: Att. *ἐ* (= *ἐν*) *στήλην*, *ἐσ* *στήλην*, Cret., Rhodian *ἐ* *στάλαι*, Elean *τὰ* (= *τὰν*) *στάλαν*, Att. *ἐς* *Σάμωι*, *ἐᾷ* (= *ἐᾶν*) *Σαλαμῖνι*, Ion. *τῶς* *συμπάντων*. The situation is the same as that in the compound words in Attic: *σύν-σημα*, *σύν-ζυγία*, *σύν-σημος* from *σύν-*.

(b) before a liquid: Att. *ἐρ* (= *ἐν*) *ῥόδωι*, *τῶρ* (= *τὸν*) *ῥόδιον*, *ἐλ* (= *ἐν*) *λίμναις*, Epidaurian *τῶλ* (= *τὸν*) *λίθων*. This is the same assimilation as in Attic *ἐρ-ρίπτω*, *συρ-ρέω*, *ἐλ-λέπω*, *συλ-λέγω*, etc.

(c) before a *F*: Arc. *τὰ* (= *τὰν*) *Ῥάδω*.

(d) before a labial and a guttural: Att. *νῦν* *μέν*, *ἐστὶν* *περὶ*, Arc. *πόσοδοι* *πένντω*, Arg. *ποισίην* *κατά*.

In the Cyprian inscriptions the final *n* often is missing before a consonant, as for instance *τὰ πρόλιν*; in Pamphylian it usually is missing, cf. *ἰ*=*ἐν*, *πόλι* = *πόλιν*, *ῥδν* = *ῥντων*.

For this reason the lack of the final *n* in the Mycenaean texts is not an "orthographic convention" but a phonetic phenomenon which is present in Pamphylian and Cyprian from the classical period. In these two dialects and in Mycenaean (or at least in Cretan), the reason for the lack of the final *ν* and for the lack of a nasal before a consonant in the middle of the word is almost the same. The combination of vowel + nasal before a consonant became a weakly nasalized vowel⁵⁷ and the weakly nasalized element was either not marked in writing or had completely disappeared. Of course this phenomenon could also be the result of assimilation.

3.1.8. Conclusion

The following conclusions can be drawn from the Homeric archaisms *δῶ*, *ἰχῶ*, *κυκε(ι)ῶ*, from Hesiodus' *ἄλκυρα* and from some other specific features of the Greek dialects, especially of Cyprian:

(1) In Homeric (which is the final stage of development of the Mycenaean koiné) some forms without a final consonant were preserved as isolated archaisms: these are vestiges of the Mycenaean koiné.

⁵⁷ As *sandhi* in Sanskrit shows, cf. *tq sīham* 'this lion'; this phenomenon can be considered to be common IE.

(2) The lack of the final consonants *ς*, *ν*, *ο*, *ι* in the Mycenaean texts is not an "orthographic convention" but is due to some of the phonematic peculiarities of this Greek dialect.

(3) The lack of final *ν*, *ο* in some noun endings is an archaism inherited from IE.

(4) The lack of final *ς* and *ν* in some verbal and substantival endings, in the preposition *ἐν*, etc., is due to the principles of *sandhi*, which were inherited from IE: it is the result of the generalization of one of several possible forms of *sandhi*.

Thus, in spite of the fact that the "graphic thesis" is now widely accepted, the explanation of the specific features of Mycenaean writing as being phonematic (linguistic) peculiarities of Mycenaean has many adherents.⁵⁸

3.2. The Eteocretan Language and the Greek Dialect of Phaistos

A number of scholars continue to consider the inscription in Linear A to belong to a pre-Greek non-IE language. Thus, for instance, Matz (1956:71) writes: "There can be no doubt that the language of the tablets with Linear A is not an IE language." There are no sound reasons for such a categorical statement. This is nothing more than an atavism from the old erroneous theory which was widespread in the past. Thus, the inscriptions in Linear B were considered *a priori* to be pre-IE (or pre-Greek)⁵⁹ despite the fact that nobody had succeeded in deciphering them. In contradiction to the existent theory, the decipherment of these texts showed that the language in which they are written is a Greek dialect. This is a typical example of the erroneous conclusions derived from a prestigious but actually erroneous theory about the origin of the ancient peoples of the Aegean area and Asia Minor. Such *a priori* assumptions hampered the decipherment of the Mycenaean texts for a long time.

A famous passage in the *Odyssey* (XIX, 172-177) gives us the most ancient information about the ethnical and linguistic situation on the island of Crete:

Κρήτη τις γαῖ' ἔσσι
 ἐν δ' ἄνθρωποι
 πολλοί, ἀπειρέσιοι καὶ ἐννήμοντα πόλῃες.
 ἄλλη δ' ἄλλων γλῶσσα μεμειγμένη ἐν μὲν Ἀχαιοί,
 ἐν δ' Ἐτεόκρητες μεγάλητορες, ἐν δὲ Κύδωνες,
 Δωριέες τε τριχάμκες, δῖοι τε Πελασγοί.

According to Thucydides (I, 12) the Dorians conquered the Peloponnesus 80 years after the Trojan war, i. e., around ±1100 B. C. During the classical period the Island of Crete was inhabited by a Doric or Dorianized population. Thus between 1100 and 800 B.C. the pre-Doric population that remained on the island became Dorianized. The passage from the *Odyssey*

⁵⁸ Cf. Merlingen 1959, *passim*; Rosenkranz 1959: 15-16; Lurja 1960: 201-202; Strunk 1961.

⁵⁹ Cf. for instance Buck 1933: 16: "The language of the undeciphered Cretan script was undoubtedly pre-Greek."

describes the ethnic situation on the island of Crete immediately after the Doric invasion.

Before the invasion of the Dorians the island of Crete was inhabited by Eteocretans, Pelasgians, Kydonians, and Achaeans.

The Mycenaean civilisation was developed by the Achaeans. Coming from the Peloponnesus they conquered some parts of the island of Crete during the second half of the 15th century B. C. Their language is preserved in the Linear B inscriptions from Knossos, Pylos, Mycenae, etc.: this is the Mycenaean dialect of the Greek language.

The Pelasgians were the pre-Greek population of the southern and central eastern part of Greece (and the neighboring islands). They spoke a language conventionally called "Pelasgian" or "pre-Greek" which was reconstructed on the basis of the substratum preserved in the Greek vocabulary and onomastics. The position of this language was intermediate between Thracian and Hittite-Luwian; despite the fact that it was close to Hittite-Luwian it cannot be identified with it.

As we shall see later, Linear A was used in two different languages. The tablets from Haghia Triada, dating from the end of the 16th century or from the first half of the 15th century B. C., were written in a Greek dialect which was different from Mycenaean (Linear B). The other inscriptions, some of which are much older (they date from the first half of the 2nd millennium B. C.), were found in different places in Crete: they are written in a language of Luwian origin.

The pre-Greek language of the Linear A inscriptions can be identified with Eteocretan. The Eteocretans ("the real Cretans"), who inhabited (eastern and central) Crete from at least the 3rd millennium B. C., were of Luwian origin.

Kydonia was a port in northwestern Crete. The Kydonians inhabited the western part of the island at that time. *Κύδωνία* 'the city (region) of *Κύδωνες*' is a derivative from the name *Κύδωνες*. This name is of Greek origin: it means 'glorious, renowned' and is identical with the personal name *Κύδων*, a Greek derivative from an inherited IE root from which *κιδάω*, *κιδάω* 'to give or do honor to', *Κυδαντι-ΐδαι*, Att. *demos*, *κῦδος* n. 'glory, renown', *κιδός* 'glorious, renowned' are also derived.

Thus "Kydonians" is the name one could conventionally give to the authors of the Greek inscriptions in Linear A from Phaistos (Haghia Triada). The name of the city of *Φαιστός* is also of Greek origin. There are three other cities in Greece with the same name: one in the Peloponnesus, one in Achaea, and one in Thessaly. This city name is identical with the personal name *Φαῖστος*. Both of them originate from *Φαῖστος* (= Myc. *paṭto*, trisyllabic) from **φαF-ιστος*, the superlative of *φά(F)ος* n. 'light', cf. Hom. *φάω* 'shine', etc. The Greek dialect in Linear A from Haghia Triada (Phaistos) can be called Phaistian.

3.2.1. Cretan Writing

Writing appeared on the island of Crete most probably toward the middle of the 3rd millennium B. C.: this is the most ancient writing ever attested in Europe. Evans classified the Cretan written documents into four

categories: Hieroglyphic A and B and Linear A and B. These "categories" were simply different stages of the development of the same system of writing. The so-called "hieroglyphic" documents, which are very few in number, are the oldest: they have not yet been deciphered. Not long ago some scholars thought that Linear A had appeared during the period of the "second palaces", i. e. after 1700 B. C. But during the archaeological excavations in Phaistos in 1952, 1953, and 1955, tablets were discovered in the layer of the first, i. e., the oldest palaces with Linear A inscriptions on them. On the basis of this it is now thought that Linear A was used even before 1900 B. C., while the hieroglyphic writing existed long before the end of the 3rd millennium B. C.⁶⁰

This chronology of the development of the Cretan writing was established by Evans on the basis of the appearance of the writing. It has been frequently criticized. Chapoutier (1932: 183-184),⁶¹ for instance, proved that the so-called hieroglyphic writing was, like the linear writing, phonetic; the so-called hieroglyphic writing is ornamental while the linear writing is no more than the simplified form of the same writing, i. e., two different stages of the same development.

Furthermore in Phaistos a curious document, the famous disc of Phaistos, was found: according to Evans it dates not later than 1600 B. C. The signs on this disc are pictographic. Evans was of the opinion that this object was imported to the island of Crete from Lycia, but Grumach (1968: 14-16) speaks in support of its Cretan origin. This text is written in Luwian.⁶²

The Linear syllabary A consists of 80 syllabic signs and several tens of ideograms. At the present time about 350 inscriptions of Linear A have been published, mainly from Haghia Triada (about 150) but also from Knossos, Palaikastro, Phaistos, Tylissos, Mallia, Apodoulou, Gurnes, Iuktas, Psychro, Troullos, Trypeti, Kato Zakro, Prassa, Chania, etc.⁶³

The two linear systems A and B are closely related: 38 syllabic signs in the two syllabaries are identical or very similar and about 20 other signs in Linear B can be considered to be derivatives (simplified variants) of the respective signs in Linear A. Linear B is usually considered to have been derived from a variant of Linear A which has disappeared. All the identical or similar signs in the two systems probably have the same or similar phonetic value.

The Cretan tablets written in Linear A from the palace of Haghia Triada near the ancient city of Phaistos permit to apply the combinatory method since their structure is known: the form of the figures is of the same type as the form in the Mycenaean which we can read; the figures and some ideograms are known; the syllabically written words divided by "punctuation marks" have correspondences in different texts. Thus the texts in Linear A can be read by giving the signs of the syllabary of Linear A the same phonetic value as the identical or similar signs in Linear B; in this

⁶⁰ Cf. Levi 1953; Matton 1955: 29; Ventris and Chadwick 1956; Caskey 1966: 24.

⁶¹ Cf. also Deroy 1947-48: 36.

⁶² See Georgiev 1976.

⁶³ See Platon and Brice 1975; Papapostolu, Godard, and Olivier 1976.

way most of the words in Linear A can be read. Reading the Linear A texts with the help of Linear B is in principle justified: the Linear A was most probably the immediate predecessor (direct or indirect) of Linear B.⁶⁴

3.2.2. The Luwian Origin to the Eteocretan Language

According to information from the ancient authors, the **Termilians** (*Τερμίλαι*), who inhabited Lycia and were later called Lycians (*Λύκιοι*), were of **Cretan origin**: they had come from Crete to Lycia during the Minoan period. The passages which refer to the Cretan origin of the Termilians are:

Herodotus I, 173: ... οἱ δὲ Λύκιοι ἐκ Κρήτης τῶρχαῖον γεγόνασι (τὴν γὰρ Κρήτην εἶχον τὸ παλαιὸν πᾶσαν βάρβαροι). Λιενιχθέντων δὲ ἐν Κρήτῃ περὶ τῆς βασιλείης τῶν Εὐρώπης παίδων, Σαρπηδόνας τε καὶ Μίνω, ὡς ἐπεκράτησε τῇ στάσει Μίνως, ἐξήλασε αὐτόν τε Σαρπηδόνα καὶ τοὺς στασιώτας αὐτοῦ. οἱ δὲ ἀπωσθέντες ἀπίκοντο τῆς Ἀσίας εἰς γῆν τὴν Μιλήδα. τὴν γὰρ νῦν Λύκιοι νέμονται, αὕτη τὸ παλαιὸν ἦν Μιλής, οἱ δὲ Μιλῶται τότε Σόλυμοι ἐκαλέοντο. Ἔως μὲν δὴ αὐτῶν Σαρπηδὼν ἦρχε, οἱ δὲ ἐκαλέοντο τὸ πῆρ τε ἡνείκοντο οὐνομα καὶ νῦν ἔτι καλέονται ὑπὸ τῶν περὶοίκων οἱ Λύκιοι Τερμίλαι ... Νόμοισι δὲ τὰ μὲν Κρητικοῖσι, τὰ δὲ Καρικοῖσι χρέονται.

This information from Herodotus, who was born in Halicarnassus and therefore must have been quite familiar with the history of the neighboring peoples, is exceptionally important.

Herodotus VII, 92: Λύκιοι ... Τερμίλαι ἐκαλέοντο ἐκ Κρήτης γεγονότες..

Strabo XII, 571: Καὶ οἱ Κᾶρες δὲ νησιῶται πρότερον ὄντες καὶ Ἀέλεγες, ὡς φησιν, ἡπειρῶται γεγόνασι, προσλαβόντων Κρητῶν, οἱ καὶ τὴν Μίλητον ἔκτισαν ἐκ τῆς Κρητικῆς Μίλητον Σαρπηδόνα λαβόντες κτίστην καὶ τοὺς Τερμίλας κατώκησαν ἐν τῇ νῦν Λυκίᾳ. τοὺτους δ' ἀγαγεῖν ἐκ Κρήτης ἀποίκους Σαρπηδόνα, Μίνω καὶ Ῥαδαμάνθυος ἀδελφὸν ὄντα, καὶ ὀνομάσαι Τερμίλας τοὺς πρότερον Μιλήας... ἔτι διὲ πρότερον Σολύμους, ἐπελθόντα δὲ τὸν Πηιδίονος Λύκον ἀφ' ἑαυτοῦ προσαγορευσα τοὺς αὐτοὺς Λυκίους.

In the Lycian inscriptions from the 5th-4th centuries B. C. the name *Λύκιοι* is not mentioned: this people is mentioned as *Trēmīle* = *Τερμίλαι*, *Τρεμίλαι* 'Termilians'. This fact corresponds to the information given by Herodotus.

In several articles published between 1957 and 1967 the French Hittitologist Laroche proved that the language of the Termilian inscriptions (= Lycian) was simply a late form (a late dialect) of (Western) Luwian (see section 6.4).

These data are confirmed by the following fact: in eight inscriptions written in the Linear A which come from different places on eastern and central Crete (Palaikastro, Petsofa, Psychro, Prassà, Knossos, Troullos, Apodoulou), a group of signs is to be found, i. e., one word, which appears

⁶⁴ Cf. Pugliese Carratelli 1952-54: 4; Georgiev 1955-56: 89-92; Suppl. 34; 1957a; Meriggi 1955: 69, no. 3; 1956a: 191-193; 1956b; Goold and Pope 1955; Furumark 1956; Ktistopoulos 1956; Ventris and Chadwick 1956: 31-33; Peruzzi 1957; 1959a, 1959b; 1960a; 1960b.

only on religious objects and on libation vessels. In view of this fact, for a long time (since St. Xanthudidis and Evans) there was an assumption that this group of signs meant the name of a Minoan god.⁶⁵ Luckily this name can be read with the help of the syllabary B because it is inscribed with signs whose phonetic value is known from syllabary B: it reads *asasara* (*jasasara*) and *asasaramē*. Since in Luwian the vowel *a* corresponds often to Hittite *i*,⁶⁶ Palmer (1958: 75-76; 1965: 127-129; Palmer and Boardman 1968)⁶⁷ compared *asasara*, *asasara-me* with Hitt. *ishassara* 'Lady' and *ishassara-mi* 'My Lady'.⁶⁸ Thus this is the *πόρνια* '(the) lady' from the (Greek) and pre-Greek religion.

This interpretation is of great importance: it is the final proof that (1) during the Mycenaean period on the island of Crete there was a population which spoke a language of Luwian origin, and that (2) the inscriptions in Linear A are written (at least partly, see below) in the language which can conventionally be called **Eteocretan** (= Minoan).

As was pointed out above, Linear A can be read by ascribing, as far as possible, the known phonetic values of the same or similar signs in Linear B to the signs of the syllabary A. The majority of words in Linear A can then be read.⁶⁹

The phonetic value of the signs most frequently met in syllabary A has already been agreed upon: it was established according to their full or partial identity with the signs in syllabary B. Due to their frequency these signs are the most important syllabic signs and they form the basis for our interpretation. Thus Linear A is deciphered; what remains is the interpretation of the texts.

The inscriptions in Linear A date from the first half of the 2nd millennium B. C., from the 20th to the beginning of the 15th century. The most ancient Luwian texts are from the 16th century; the Termilian (= Lycian) inscriptions are from the 5th-4th centuries B. C. Thus these texts belong to different periods. Furthermore, Luwian and Lycian are not very well known. In order to interpret the Cretan inscriptions in Linear A we have to make use of Hittite, which is closely related to Luwian. However, a Cretan text cannot be directly deciphered on the basis of similar words and grammatical forms in Hittite: a methodical analysis is necessary. Evaluated from a comparative point of view, Eteocretan = Old Termilian and Luwian have so many features in common that one could rightly say that Eteocretan = Old Termilian and Luwian are closely related dialects which belong to the Anatolian group of the IE family. The method of interpreting Cretan inscriptions in Linear A with the help of Hittite (and Luwian) is similar to the method of interpreting the Avestan texts through Sanskrit or the Oscan-Umbrian inscriptions through Latin.

Having proved that the Eteocretan (= Old Termilian=Minoan) texts with the exception of the texts from Haghia Triada (see section 3.2.3), were

⁶⁵ Cf. Platon 1958: 311.

⁶⁶ Cf. for instance Luw. *aya-* = Hitt. *iya-* 'to make', Luw. *assa-* n. = Hitt. *ais* 'month', gen. *iss-as*.

⁶⁷ See also Huxley 1960.

⁶⁸ The sacrificial altar in the cave at Psychro (Dikte) with *jasasaramē* (Brice 1961, I, 1) is from the sanctuary of a goddess, cf. Faure 1964: 156.

⁶⁹ Cf. Pope 1964: 5.

written in a language of Luwian origin, let us take four examples which demonstrate the concrete application of our method in interpreting the inscriptions of Linear A.

Prassà I, 17 (Libation vessel):

This text was written on the three sides of a small rectangular vessel (libation basin) which was found together with other religious objects in Prassà near Heraklion; it belongs to LM Ia (= 16th century B. C.).

TA ta-ja-ke

a-za-no

a-sa-sa-ra-me

The reading is completely reliable. The first sign, *ta*, is larger than the second and furthermore the space between the first two signs is larger than between the others. It seems that in this way *ta* is separated from *tajake*. Plato (1958: 307) writes: "The small space appearing after the three signs on the narrow side would be easy to explain on the theory that each of the sides contained only one word." At the same time Plato stresses the fact that "the perishing of the surface makes it not impossible that the fourth side also had an inscription which has now worn away."

The last word, *a-sa-sa-ra-me*, which according to the rules of Linear B should read. *a(i)sasara-me(i)*, is = Hitt. *ishassara-mi* dat. sing. 'erae meae', cf. Hitt. *isha-ssi* 'ero-suo'. Since the IE diphthongs are monophthongized in Hittite, *ishassara-mi* refers to the older form **ayshassara-me(y)* which is the same as the Eteocretan form. Thus the Eteocretan language attested during the first half of the 2nd millennium B.C. is more archaic than Hittite (19th-13th centuries B. C.).⁷⁰ The assimilation of the laryngeal (*sh > ss*) is attested in Luwian.

The dative *asasara-me* shows that the text has to do with a dedication. The Greek and Latin dedication inscriptions usually begin with a demonstrative pronoun: *ta* at the beginning of the text is the Luwian demonstrative pronoun (Hier. Luw.) *ta*- 'this'.

In votive inscriptions we very often find a verb with the meaning of 'dare, donare, dedicare, ponere': *tajake*, which according to the rules of Linear B should read *taih(h)e(i)*,⁷¹ could be = Hitt. *tehhi* 'pono' (2nd pers. sing. *taaitti* 'ponis') from *taai*-.

azano is probably = Hitt. *assanu(wa)n* n. sing. nom. acc. of *assanuwant*- 'ausgestattet; versorgt, gefeiert; passend, erwünscht'. The contraction *uwa > u* is typically Hittite-Luwian. The phonetic development in Eteocretan was probably *-uwan > -o(w)a > -o*, see below, cf. *Menuwa(s) > Μινως*. But *azano* = Hitt. *ssanuwant(s)* could be a personal name, cf. Hitt. *Asu(w)an* = *assuwant*- 'good', *Istalkian* = *istalkiyant*- 'flattened, squashed', etc.

The Latin translation of this text is as follows: 'Hoc pono (*sive* posui) exornatum (?) erae meae'. One could assume that the name of the dedicator was written on the fourth side of the vessel, where the signs have been effaced.

Tylissos II, 18 (Graffito on shoulder of a *pithos*):

a-ṭi-ki-ta-a = Atti kita-a(s)

= Hitt. *Atti kitti-as*. 'Patri (= deo) ponitur (*sive* positus est) is (*sive* ea, scil. *pithos*)'; Kato Zakro III, 8 (Roundel):

¹*a-ti-ka-a* ²*RI* (?) ³*JE*₂ (?) ² = *Ati kaa(s)*...

⁷⁰ Cf. Old Hitt. *eshe* > Late Hitt. *ishi* dat. sing. from **aysh-ey*.

⁷¹ According to the principles of syllabary B, the sign *ke* means the Greek syllables *ke*, *ḱe*, *ḱe*; in Eteocretan inscriptions in Linear A the sign *ke* had the phonetic values *ke*, *he*.

= Hitt. *Atti kaas...* 'Patri (= deo) (est) hic (*sive* haec)...'

ati = Hitt. *atti* dat. sing. from *atta-s* 'father'.

kita = Hitt. *kitta* 3rd pers. sing. pres. mediopassive from *ki-* 'to lie, to be laid'.

-a(s) = Hitt. *-as* 'is, ea', *-at* 'id' enclitic pronoun.

kaa(s) = Hitt. *kaa-s* 'hic, haec' demonstrative pronoun.

Knossos I, 8 (Fragment of a libation table):

ta-nu-a-ti. ja-sa-sa-ra-[ma]

na. do-wa-[-] du-wa-na i(?) -ja

'[This altar X] erects to (= sets up for) My Lady. No one shall take the offerings from it (or here).'

This is Palmer's interpretation (1965: 334-335; Palmer and Boardman 1968: 348-349).

tanuati 3rd pers. sing. pres. from Hier. Luw. *tanu(wa)-* 'to raise.'

jasasara-[ma], see *asasara-me*: *-me* = *-ma* dat. sing.

na = Hier. Luw. *naa* 'no'.

dawa[-], cf. (?) Hier. Luw. *ta-* 'to take'.

duwana, a derivative (?) from Hier. Luw. *tu(wa)-* = Luw. *duwa-* 'to lay, to put'.

i(?)ja = Hier. Luw. *iā* nom. acc. pl. n. from *i-* 'is, hic' or = ? *iāti* dat., abl. or adverb (?).

The first line may also be translated as 'Erigo tibi, era mea'. Cf. Hier. Luw. *tanu-wawaa* = *tanúwaa* 1st pers. sing. pres. from *tanu(wa)-* 'to raise', see Meriggi 1962b: 119.

An attempt at decipherment of the text on the Phaistos Disk and of the inscription KH5 from Chania is given in Georgiev 1976.

Other evidence for the Luwian origin of these texts (and for their successful interpretation) is the fact that their grammatical and lexical structure are the same as that of Luwian (and Hittite). Every language has its own specific grammatical and lexical structure. A satisfactory interpretation of an unknown text consisting of about 30 syllables can only be reached by making use of a closely related language.

These linguistic data are in accordance with the information given by the ancient authors (Herodotus, etc.). Therefore Eteocretan = Termlian (Minoan) is very close to Luwian.

3.2.3. The Language of the Inscriptions of Haghia Triada

Half of the texts in Linear A come from Haghia Triada. These are the latest Cretan inscriptions written in Linear A: they date from the first half of the 15th century B. C. (or the end of the 16th century B. C.).

When comparing the linguistic material of the tablets from Haghia Triada with the other inscriptions in Linear A, one notices an essential difference, namely that the words which are most frequently found in the tablets from Haghia Triada are not found in the other inscriptions in Linear A. Thus *kuro* (34 times), *sara*₂ (21 times), *kiro* (14 times), etc., are not found in inscriptions from outside Haghia Triada. Conversely, the words most frequently found in the older texts, *asasara* (and *jasasara*, 8 times), *waL20* or *wapi* (5 times), *atanope*₂ (and *jatanope*₂, 5 times) etc., are not found in the tablets from Haghia Triada.

This important fact may be interpreted in the following way: either the contents of the tablets from Haghia Triada are entirely different from the other texts, or we are faced with two different languages. But the fact that words which can be deciphered with certainty as being Eteocretan (for instance, *asasara*) do not appear in the tablets from Haghia Triada, and the fact that in the Haghia Triada texts there are words of clearly Greek origin, indicates the existence of two different languages: Eteocretan = Termilian and Greek.

The Hittite syllabary was used for writing in different languages (Hittite, Luwian, Palaic, Hattic). Thus it is very probable that Cretan syllabary A was also used for two different languages. The Greeks obviously must have known about syllabary A in order to create their syllabary B, which is simply a derivative of syllabary A.

In my book *Les deux langues des inscriptions crétoises en linéaire A* (1963) I tried to prove that the tablets from Haghia Triada are written in a Greek dialect which is different from Mycenaean, i. e., the tablets in Linear B. The Achaeans were not the first Greeks on Crete. Crete was inhabited by Greeks before the invasion by the Achaeans (Linear B) and these Greeks were the Kydonians (*Κύδωνες*) who inhabited western Crete and the southern region of the central parts of the island.

Below are some words whose Greek origin is obvious.

kaudeta, at the beginning of the tablet HT 13, where six personal names are mentioned, is = *Καυδέτα(ι)*, an ethnicon from *Καῦδος*, the name of an island not far from Haghia Triada. The formation of this ethnicon is Greek, cf. *Κολωνέτης*, an ethnicon from *Κολωνός*, *κωμ-έτης* 'inhabitant of a *κώμη*', etc. One of the personal names is *kudoni* = *Κύδωνι*, dat. from *Κύδων*.

pataqe + VAS 3000 (HT 31), with the largest figure at the end of an enumeration of vessels followed by figures, means 'and all vessels (are) 3000': *pataqe* is = Att. *πάντα τε*. In the same inscription we find *puko* = Att. *φύκος* 'seaweed, orchil' and *qapa₂* + VAS = Att. *βαφή* 'dye' from **γῶφα*, cf. KN *meri* AMPHORA or *me* + *ri* + AMPHORA = *μέλι* 'honey'.

At the beginning of tablet HT 6a we find *kapa. datara. te. NI 15* (some other words and figures follow) = (*Σ*)*κάρα δα(ι)τεὰ θέ(ς)*, *ΣΥΚΑ 15*... 'In (each) boat put (the following) ration: 15 figs...'.

At the beginning of tablet HT 116 one finds: *dataro. te* and thereafter follow the ideograms FRUMENTUM, OLEUM, OLIVA, followed by figures = *Δα(ι)τερό(ν) θέ(ς)*... 'Put the (following) ration...'.

On tablet HT 91 after the ideograms FRUMENTUM, OLEUM, OLIVA, *NI, TU*, we find the words *papa* = Att. *πάμπαν* 'wholly, altogether' and *pa* = Att. *πᾶν* 'all, the whole' instead of figures. On tablet HT 23 one also finds *pa* = *πᾶν* after the ideogram CYPERUS, while after the other ideograms there are figures.

The meaning of the word which appears most frequently in the tablets from Haghia Triada is clear from the context regardless of the decipherment: this is the word *kuro* 'total, in all', which occurs at the end of the tablet and is followed by a figure which is the sum of all the figures written on the tablet; *kuro* is = Att. *γυρόν* (or *γυρῶς*) 'rounded', cf. *a round sum, round figures*.

On the front side of tablet HT 122a we find personal names followed by figures and at the end the sum total *kuro* 31. On the back side one can see the ideogram VIR in the first line, followed by personal names, and at the end we find: *kuro 65 poto kuro 96*.

The interpretation of the words in front of the three sum totals at the end of both sides of the tablet is clear:

kuro 31

kuro 65

poto kuro 96

The third sum is the sum total of the previous sums $31 + 65 = 96$. Thus *poto* means something like 'all'. Therefore *poto* = Att. *πάντως* '(in) all', *poto kuro* = *ποτῶ(ς) γυρό(ν)* means '(in) all round = total'. Att. *πάντως* is an innovation after *πα(ν)ς*, *πᾶν*, *πάντες*, etc.; the archaic *poto* = *ποτῶ(ς)* comes from IE **pnt-ō-* with an *o* from *ṇ* which is a regular phenomenon in Mycenaean,⁷² cf. Myc. *pemo*=*pema*, Att. *πέσμα* with *o* or *a* from *ṇ*.

Tablet HT 117 begins with the words *makarite. kiro- uni|nai* (personal names follow)= 'Gladio duri (= experti, periti) in pugnis...'

The suffix *-it-* instead of *-id-* is a dialectal feature, cf. Myc. *atemito* (PY) = Dor. *Ἀτέμιτος* but Att. *Ἀτέμιδος* gen.

The fact that Meriggi (1956b: *kapa, puko, qapa₂, qe, sara₂*), Peruzzi (1960a: *kaudeta, kudo, mate, pitaia, poto*), Nagy (1963: *atu, datara, kaku, kumina, kuruku, maru, paratu, pitakase, qe*), and I agree not only on the reading but also on the interpretation of some words from the tablets of Haghia Triada is important.⁷³ The same applies to the interpretation of the other inscriptions done by Palmer and myself.

3.2.4. Conclusion

Undoubtedly a number of the interpretations given in my book cannot be considered to be decisive but many of these interpretations cannot be refuted. Cases such as *asasara* = Hitt. *ishassara(s)* 'era' (voc. or nom.), whose readings are indisputable and whose interpretations are obvious, prove that the decipherment is correct and that the language of these texts is closely related to Luwian. Moreover, *kaudeta* = *Κανδέτα(ι)*, *kudoni* = *Κύδωνι*, *pataqe* = Att. *πάντα τε*, *qapa₂* = Att. *βαφή* from **γ^wαφᾶ*, *datara* = Hom. *δαυρά*, *dataro* = Hom. *δαυρόν*, etc., prove that the tablets from Haghia Triada are written in a Greek dialect.

As regards Linear B, purely combinatory evidence can be given to show that the inscriptions are deciphered. Since texts in Linear A are less numerous, the proof for their decipherment is complex, i. e., combinatory and linguistic. Most archaeologists, historians, and philologists feel a certain mistrust towards linguistic evidence. For this reason the decipherment of Linear B has few adversaries, while the decipherment of Linear A has few adherents.

⁷² IE **pánt(s)* > *pa* and **pnt-ō-* > *poto* are the correct forms of IE vowel gradation, cf. Ved. *panthāḥ* = Av. *panthā* 'road' from **pónteh-s* and gen. *path-āḥ* = Av. *paβō* from **pñth-ós*.

⁷³ Davis' attempt (1961) at interpreting the inscriptions written in Linear A through Hittite is incorrect. The attempt to interpret these texts through Semitic (Gordon, in different publications, recently 1966) or through Indo-Iranian (Kamm 1965) are not convincing. Nevertheless these publications show that the reading of the majority of the words in Linear A is trustworthy.

3.3. The Discovery of "Pelasgian": an Example of New Application of the Comparative-Historical Method

In analyzing the languages of the southern part of the Balkan Peninsula the comparative-historical method was given a new application. Merlingen (1953: 3) compared the significance of this new application to two important discoveries in the history of IE linguistics: Verner's law and the law of palatalization.⁷⁴

The principles of the comparative-historical method, which were perfected by the Neogrammarians, made it possible to establish the regular development of **spatially distinguished linguistic units** and to reconstruct late IE. The so-called "laryngeal theory" is a new application of the comparative-historical method which, by reconstructing older stages of IE language development, made it possible for our investigation to be carried out over **considerably more remote periods** and also made it possible to penetrate to a certain degree into PIE. The so-called "Pelasgian theory" is another new application of the comparative-historical method which is used to **establish language stratification, i. e., the mixing of languages.**

The comparative-historical method allows us to determine which words were borrowed from one language into another. In this way Germanic borrowings in the Slavic or the Romance languages can be established, as can the Celtic substratum in the Romance languages or Greek borrowings in Latin, etc. In these cases the vocabulary and phonological peculiarities of the language from which the borrowings are taken are known. **The new application of the comparative-historical method consists, first, of establishing, on the basis of the best known words of an unknown extinct language, a consistent and coherent system of the characteristic features of its comparative-historical phonology (phonematic correspondences), and then of restoring its vocabulary and determining the main features of the language itself.**

3.3.1. Historical Review

Since the middle of the 19th century scholars have shown great interest in the ancient peoples of Asia Minor and their languages. Gradually numerous facts have been accumulated which allowed certain assumptions to be made about the languages of the tribes and peoples in the Aegean region.

The Greeks were not autochthonous inhabitants of the Aegean region. The ancient writers give information about this: Herodotus (II, 56) and Thucydides (1, 3, 1) point out that the Pelasgians lived in the Aegean region before the Greeks. During the second half of the 19th century new facts were added to this information. It transpired that a great number of toponyms from the Aegean region cannot be explained on the basis of the Greek language.

⁷⁴ Merlingen (1955a: 3). Haas (1959: 62) stresses that "der Theorie Georgievs... die allergrösste Bedeutung für die Geschichte der Griechen und der Indoeuropäer überhaupt zukommt."

The toponymic suffixes *-νθ-* and *-σ(σ)-* or *-ττ-* in some dialects (Att., Boeot., etc.) are especially typical. Some examples are:

-νθ-

- Ἀμάρινθος*, a settlement of the island of Euboea
- Ἀράκυνθος*, mountains in Aetolia, Boeotia, and Attica
- Βερέκυνθος*, a mountain on the island of Crete
- Ἐρύμανθος*, a mountain in Arcadia
- Ζάκυνθος*, an island to the west of the Peloponnesus
- Κήρινθος*, a city on the island of Euboea
- Κόσκυνθος*, a river on the island of Euboea
- Κόρινθος*, a city in the northern Peloponnesus
- Κύνθος*, a mountain on the island of Delos
- Λαβύρινθος*, the Labyrinth on the island of Crete
- Πρεπίσινθος*, an island in the Aegean Sea
- Προβάλινθος*, a place in Attica
- Πύρανθος*, a city on the island of Crete
- Σάμυνθος*, a place in Argolis
- Τίρυνς*, *-νθος*, a city in Argolis
- Τρικόνυνθος*, a village (*demos*) in Attica
- Ῥάκινθος*, a hill and a village (*demos*) in Attica

-σ(σ)- | *-ττ-*

- Ἀμνισός*, a river and a city on the island of Crete
- Ἀρδητιός*, a hill near Athens
- Βένκασσος*, a river on the island of Crete
- Βριλησ(σ)ός*, a mountain in Attica
- Γαργητιός*, a hill and a village (*demos*) in Attica
- Αιρφωσσός*, a mountain on the island of Euboea
- Ἰλισός*, a river in Attica
- Κερησσός*, a place in Boeotia
- Κητιός*, a village (*demos*) in Attica
- Κηριο(σ)ός*, rivers in Phocis, Attica, Eleusis, Salamis, Sicyonia, Argolis, Skyros
- Κρωσ(σ)ός*, a city on the island of Crete
- Λυκαβητιός*, a mountain in Attica
- Μάρπησσα*, a mountain on the island of Paros
- Μυκαλησ(σ)ός*, a city in Boeotia
- Παμισός*, a river in Thessaly
- Παργασ(σ)ός*, a mountain in Phocis
- Ποικιλασσός*, a city on the island of Crete
- Πρωσσός*, a city on the island of Crete
- Πυρσός*, a city in Thessaly
- Συπκαλητιός*, a village (*demos*) in Attica
- Σφητιός*, a village (*demos*) in Attica
- Ταφιασσός*, a mountain in Locris and Aetolia
- Τενμησ(σ)ός*, a mountain in Boeotia
- Τυλιός*, a city on the island of Crete
- Υητιός*, a village in Boeotia
- Υμητιός*, a mountain in Attica

These toponyms correspond in formation to toponyms in western and southern Asia Minor, where the suffix *-νθ-* corresponds to *-νθ-*, cf. for instance *Ἀσπενδος*, a city in Pamphylia, *Κάλυνδα*, a city between Caria and Lycia,

Καρίανδα, an island (and a city) in Caria, *Οινόανδα*, a city in Pisidia, *Σίλανδος*, a city in Caria, *Ἀλιζανρασ(σ)ός*, a city in Caria, *Μόλασος*, a city in Caria, etc.

Since the suffixes as well as the stems of these names could not be explained with the help of Greek or the other IE languages known at that time, they were declared to be non-IE. Toponyms of this type are found all over the Aegean region: they appear on the island of Crete and also on other islands of the Aegean, in the Peloponnesus and in central and northeastern Greece. This shows that the language of these toponyms was distributed throughout the Aegean region and Asia Minor. For this reason towards the end of the 19th century and the beginning of the 20th century it was considered as proved that the Greeks were the first Indo-Europeans in Greece and that it was not possible for IE tribes or peoples to have lived in Asia Minor before the end of the 2nd millennium B.C.

Greek words containing the same suffixes as the toponyms were assigned to the language of these toponyms, as for instance: *ἀσάμινθος* 'bathing-tub', *ἄλυνθος* 'fruit of the wild fig', *πλάνθος* 'brick', *τερέβινθος* 'terebinth', *ῥάκινθος* 'hyacinth', *κυπάρισσος* 'cypress', *νάρκισσος* 'narcissus', etc. Since a high ancient civilization had existed in the Aegean region, a number of Greek words which pertain to high culture (*Kulturwörter*) were assigned to the language of the people who had developed this civilization. The etymology of these words was either unknown or not clear from the point of view of the comparative-historical phonology of Greek, as for instance: *ἄναξ* 'master, chief, king', *ἀσπίς* 'shield', *βασιλεύς* 'king', *βαῦνος* (*βανός*) 'furnace, forge', *βραβεύς* 'judge, arbitrator', *θηριζός* 'cornice', *κάπηλος* 'retail dealer, tavern-keeper', *κithάρα* 'lyre', *πύργος* 'tower', *τύραννος* 'ruler, tyrant', *τύρσις* 'tower, bastion', etc.

Furthermore other words with unclear etymologies were also assigned to this language, as for instance: *διθύραμβος* 'dithyramb', *εἰρήνη* 'peace', *θριάμβος* 'hymn to Dionysos', *θύρσος* 'thyrsus', *κάλως* 'rope, reef', *κίνδυνος* 'danger', *λαός* 'people', *πέτρα* 'rock', *ῥόδον* 'rose', *σῖτος* 'grain, food, bread', *σῦκον* 'fig', *σπήξ* 'wasp', etc.

Thus the theory of the non-Indo-European character of the pre-Greek population was advanced at the end of the 19th century: it was developed and formulated by three eminent linguists, Pauli, Kretschmer, and Fick,⁷⁵ and it was universally accepted for more than a half a century; it is still trustworthy among certain historians and archaeologists. According to this theory, the population of Asia Minor spoke non-IE languages and the Indo-Europeans did not penetrate into this region until towards the end of the 2nd millennium or the beginning of the 1st millennium B. C. Furthermore, it was considered to be proved that the non-Indo-European pre-Greek language was related to the language of Asia Minor. Although the phonetic values of the signs were not known, on the basis of this theory it was accepted *a priori* that the Creto-Mycenaean texts from the 3rd and 2nd millennia B. C. were written in a pre-IE language.

⁷⁵ The most important and widely recognized book on the subject was Kretschmer 1896.

3.3.2. The Indo-European Character of the Pre-Greek Language

The problem of the origin of the pre-Greek language (or languages) is undoubtedly one of the most important problems in Greek and IE linguistics, especially for the history of the ancient peoples in the Balkan Peninsula and Asia Minor. Recently a number of facts were revealed which fundamentally changed our views on the genesis of the population of the Aegean region and Asia Minor. The most important fact was the establishment of the IE character of the Hittite language, which dates from the 2nd millennium B. C. In the light of the new facts the time during which common IE had existed shifted into a more remote period than it previously was considered to have been and the thesis that the Greeks were the first Indo-Europeans in the Aegean region was refuted.⁷⁶ Moreover, other IE languages were discovered in Asia Minor and the decipherment of the Mycenaean texts showed that they are written in Greek. These new data are of exceptional importance: because of it the IE character of the pre-Greek language (or languages), of Lycian, Lydian, Carian, and Etruscan became *a priori* more probable than the opposing conception, which was based on antiquated and obsolete views.

Between 1936 and 1941 a new way of analyzing the pre-Greek elements in the Greek language was discovered.⁷⁷ Through analysis of the words, the toponyms, the personal names, and the suffixes which were considered to be pre-Greek and non-IE, it becomes obvious that some of them could be of IE origin, i. e., they have etymological connections with words in other IE languages, but they appear in a form which does not correspond to the norms of the comparative-historical phonology of Greek. Thus, for instance, the word *πύργος* 'tower, bastion' (attested since the *Iliad*) is almost identical with the German *Burg* 'castle; fortress'. This name is undoubtedly of IE origin: it comes from **b^hrg^h*. But the phonetic laws of the Greek language do not allow *πύργος* to be derived from **b^hrg^h*: if this word were Greek, inherited from IE and correspondent to German *Burg*, according to Greek phonology it would be **πύργος*. Nevertheless the word *πύργος* can be explained as being IE if one assumes that it is a borrowing from an IE language in which it had undergone changes according to specific phonetic laws which were different from the Greek laws, namely the change of IE *r* into *ur* (and not into *ar* as in Greek), dissimilatory disappearance of aspiration (*b^h — g^h > b — g^h* as in Sanskrit), and consonant shift *b > p*, *g^h > g* (as in Armenian and Germanic).

Through detailed analysis of the so-called pre-Greek words and of the proper names a system of phonological correspondences was established which allowed a considerable number of words (and proper names) from the Greek vocabulary to be explained as IE (but not Greek). In this way it

⁷⁶ Due to this fact Kretschmer (1925) had remoulded his theory and thereafter assumed that there were two layers in the pre-Greek substratum: non-IE and PIE. Kretschmer's new view was not accepted. The majority of scholars continued to adhere to the theory of the non-IE character of the pre-Greek elements.

⁷⁷ In my first work on this problem (1936-38) some errors were made which were partially eliminated in subsequent works, see Georgiev 1941.

was established that another as yet unknown IE language was hidden in Greek. Since we do not know the name of this language, we conventionally call it "pre-Greek IE" or "Pelasgian". The most characteristic features of the Pelasgian comparative-historical phonology are the following:

(1) IE *e* is preserved but before *nt(h)* (without stress) it changed into *i*, for instance *ἔλμ(ν)ς*, *-ωνθος* 'worm' with a dissimilation from **welw-ent-*, a participle from IE **wel(w)* 'to wind, wound'.

(2) IE *ō* > *ǎ*, as, for instance, *ῥιμβων* 'crest of a hill, a rounded mound, rim or edge of a cup or of a shield' = Lat. *umbo*, *-ōnis* 'the protruding part of the shield' from IE **ombhō(n)*; *ῥιστι* 'town' from **wos-tu*: OIr. *foss* 'residence, relaxation' from **wos-to-s*, Goth. *wisan* 'to be, remain' from **wes-*.

(3) IE *r*, *l*, *n*, *ŋ* > *ur*, *ul*, *un*, *um* (also *ru*, etc.; since there was no short *o* in the phonemic system of the pre-Greek language, pre-Greek *u* also appears in Greek as *o*: *u* *o*-vowel), as, for instance, *πύργος* 'tower, bastion': G. *Burg* 'castle, fortress' from IE **bʰrǵh-*; *σῦλον*, *σίλη* 'right of seizure' from IE **sʰl̥w-*: OIr. *selb* 'ownership' from **selwo-*.

(4) There is a consonant shift (Lautverschiebung), as, for instance, *ῥεῖνος* n. 'revenue, riches' = Skt. *āpnas-* 'possession' from **opnes-* < PIE **xep-n-es-*; *εἶκω* 'to give way' = G. *weichen* 'to recede, avoid' from IE **weyg-*; *θεράπνη* 'dwelling, abode' from IE **terabna*: Gr. *τέραμον* 'house, chamber' from **terabno-m*.

(5) There is assibilation of the IE velars (the so-called palatals), as, for instance, *τῦρσις* 'tower, bastion, fortress' from **dʰrǵʰi-s*: Skt. *dʰr̥-yati* 'is strong'; *σῖτος* 'grain, wheat, bread' from **kweydo-s* (or *-i-*): Goth. *hwaitels* 'wheat' from **kwoyd-*.

(6) There is delabialization of the labiovelars, as, for instance, *ταχύς* 'swift, quick, rapid' = Skt. *taku-h* 'rushing, quick' from IE **tokʷu-s*; *φύλαξ*, *φυλάκος* 'guard, guardian, keeper' from **pul-okʷ(o)-s*: Gr. *πύλη* 'door' and *ὀμ-μα* 'eye' from **okʷ-*.

(7) IE *s* is preserved, as, for instance, *σέλας* 'light, brightness' from IE **swelos*: Skt. *svarati* 'shines, shimmers', OE. *swelan* 'to burn slowly'; *σιγή* 'silence': G. *schweigen* 'to be silent' from **swigh-*; *σῦς* = Gr. *ῥῖς* 'swine' from IE **sū-s*.

(8) There is dissimilation of the aspirates, as, for instance, *ἀ-τέμβω* 'to maltreat, afflict' from **dʰembh-*: Skt. *dambha-h* 'deceit'; *πύρραξ* 'bottom' from **bʰundh-*: Lat. *fundus* 'bottom, basis' from **bʰundh-*.

Words in which there are two or three peculiarities of the pre-Greek comparative-historical phonology are especially typical, as, for instance:

ῥιμβων *ō* > *ǎ* and consonant shift

ἀνέμβω dissimilation of the aspirates and consonant shift

ῥφρνο; *ō* > *ǎ* and consonant shift

ὀμφαξ, *-ακος* *ŋ* > *on*, consonant shift, *ǎ* > *a*, and delabialization of the labiovelar

πύργος dissimilation of the aspirates, consonant shift, and *r* > *ur*

σέλας; *s* preserved and *ō* > *ǎ*

σιγή *s* preserved and consonant shift

σῦλον *s* preserved and *l* > *ul*

ταχύς *ō* > *ǎ*, consonant shift, and delabialization

εὐφρος dissimilation of the aspirates, consonant shift, and *ŋ* > *um*

φύλαξ, *-ακος* consonant shift, *ō* > *ǎ*, and delabialization

Therefore the Pelasgian IE language has been reconstructed on the basis of a **new application** of the comparative-historical method: on the basis of substratum words preserved in the Greek vocabulary, a model of a coherent non-Greek but IE phonological system was determined through which the origin of the "Pelasgian" words was established. When these phonological laws are confirmed by other cases, and particularly when a combination of two or three similar peculiar phonological regularities is found in the same word, then the model had been checked and the existence of the substratum language has been proved.

Did this IE language exist? The changes of the velars (*k*, *g*, *g^h*) and of *ō* > *ā* are attested in Albanian, while the changes of the labiovelars and the consonant shift are found in Armenian. Hence this specific pre-Greek IE language (Pelasgian) may be given a position between Albanian and Armenian not only from a geographical point of view but also from the viewpoint of the specific features of its phonological development.

In view of the presence of this specific IE language in Greece before the settlement of the Greeks it became possible to etymologically explain a number of words, proper names, and suffixes which previously were considered to be non-IE or had no fixed etymology or were not clear from the viewpoint of the Greek comparative-historical phonology, as for instance:

ἀλείφω 'to anoint, polish' from **leyp-*: Gr. *λίπος* 'fat, lard, oil', Skt. *limpati* '(he) anoints', Ved. *rip-* 'to smear, to grease'.

ὑμῶν = L. *umbō*, -*ōnis* from **ombhō(n)*, Gr. *ὄμφαλος* 'navel, knob, boss', see above.

ἀσάμυνθος f. 'bathing-tub'. There are two other words in Greek besides this word with the meaning of 'tub': *οκάφη* (or *σκαφίς*) f. 'tub, basin' and *δοοίτη* 'bathing-tub'. *Σκάφη* or *σκαφίς* (cf. *οκάπτω* 'to dig') is the name of the general concept, *δοοίτη* from **drof-ia* 'wooden' (scil. *οκάφη*) originally meant 'wooden tub, trough', while *ἀσάμυνθος* (scil. *οκάφη*) originally meant 'stone tub': it corresponds exactly to Skt. *uśmanta-* 'fire-place', literally 'stone'⁷⁸ from **ak-men-to-*, cf. Skt. *āsmā* 'stone'. We are familiar with stone or earthenware tubs from the Mycenaean period. The second *a* in *ἀσάμυνθος* is an anaptyctic phoneme, cf. Elean *Σαλιμώνα* < *Σαλιμ-*, Att. **Ἐσμήης* < **Ἐσμήης*. The changes *k'* > *o*, *en(t)* > *in(th)*, and *t* > *th* (θ) are typical of the pre-Greek language. Cf. also Lith. *Ašminta*, a toponym.

ἄστυ 'town' from **wos-tu-*: Ir. *foss* 'residence' from **wos-to-*, Goth. *wisan* 'to be, reside, remain' from **wes-* (Ablaut *e/o*).

ἀτέμνω from **dhembh-*: Skt. *dabhati*, *dabhnoti* 'deceives', *dambha-* m. 'deceit', see above.

ἀνέζομαι 'to be distraught from fear, bewildered; to be amazed at a thing' = *ὀδύσσομαι* 'to be wroth against, hate' from **odughy-* < PIE **xed-ugh-y-*.

ἄφρος, *ἄφρεος* 'revenue, riches, wealth', *ἀφρεός*, *ἀφρεός* 'rich, wealthy': Skt. *āpnas-* n. 'possession', Av. *afnah-vant-* 'rich' from PIE **xep-n-es-*, Hitt. *happin-ant-*, *happin(a?)-* 'rich', *happin-ahh-* 'to be rich', *happin-es-* 'to become rich' from PIE **xepen-*, L. *ops*, pl. *opēs* 'power, well-being, wealth; pl. means, property', *op-ul-entus* 'rich' from PIE **xep-en-ent-*.

βαίως 'white' from **bhol-*: Gr. *γαίως* 'white' from **bhlǵ-*.

βόσκυρος 'sorcerer, slanderer', *βόσκειν* λέγειν, *κακολογεῖν* (Hesych.): Gr. *φάσκω* 'to say', L. *fascinum* 'charming' from **bhask-*.

βρέτας n. 'wooden statue' = G. *Brett* 'board' from **bhredh-os* n.

Hom. *γαῖα*, Att. *γῆ*, Ion. *γῆη*, Dor. *γῆ* 'land, country, earth' from **ghaw(y)ā* or **ghaw(y)ā (-ya)*: Goth. *gawī* 'country, region', G. *Gau* 'region' from **ghawyo-m*, Arm. *gavar* 'region', Gr. *χάος* n. 'chaos, space' from **ghaw-os*.

⁷⁸ Cf. OPruss. *stabis* 'stone' and *stabni* 'stove (made of stone)'.

- δέω* 'to wet, drench': Gr. *χέ(F)ω* 'to pour, pour out, let flow' from **ghewō*.
δονέω 'to shake, sway': Skt. *dhunóti* 'shakes, sways' from **dhun-*.
δρόσος 'dew' from **dhrus-*: OHG *trōr* 'dew, rain', Goth. *driusan* 'to fall' from **dhrews-*.
δύναμαι 'I may, have power, I am strong', *δύναμις* 'power, force, rule' from IE **gun-*: Skt. *junāti* 'to speed up, encourage, chase, excite', Av. *zavah-* 'force' from IE **gew-*.
εἵλω 'to give way, retire': Skt. *véjate*, G. *weichen* 'to recede' from **weyg-*.
ἐλαίον 'oil, grease' from PIE **loy-wo-m*: Slav. *loi* (> Lith. *lājus*) 'lard' from PIE **loy-u-s*.
ἐλμυ(ν)ς, -ινθος 'worm' from **welm-ent-* with dissimilation from IE **welw-ent-*, a derivative from **wel-u-* 'to wind, twine', cf. L. *volvo* 'to turn, roll' from **welwō*, Arm. *gelu-m* 'turn, twine' from **welu-*.
ἐσθλάνη 'dwelling, abode' from **tarəbnā* < PIE **terhbn-*: Gr. *ἐσθλάνον* 'house, chamber' from PIE **terhbno-m*.
ἔδη 'wood, tree': Otr. *fid* 'wood, tree', OHG *witu* 'tree' from **widh-*.
ἐνυς 'force, energy': OE. *cwicu*, E. *quick* from **gwig-u-*.
ἐλαγή 'share, ditch' from **lakwā*: Gr. *λάκκος* 'ditch, reservoir' from **lakwo-s*, L. *lacus* 'lake, ditch', OBG *loky* 'pool'.
ἐλνθή, ἐλνθα, ἐλνθος f. 'mint' from pre-Gr. **mi-(ya)nth-* < IE **mi-(yo)nt-* 'calming' (*iya* > *i* as in Hittite-Luwian): Otr. *mīn* 'tender, kind, weak, soft, small', Skt. *miyāte* 'to become smaller', L. *minuo* 'to decrease'. Mint is used in folk medicine as a tranquilizer.
ἐλνθος 'human ordure', *ἐμνθόω* 'to besmear with dung' from pre-Greek **mi(ya)nthā-*: Gr. *μυαντός* 'stained, defiled', *ἀμύντος* 'undefiled, pure', *μυαίρω* 'to stain, to soil', *μυαίσις* f. 'pollution', *μυάντης* 'who pollutes, avenger'.
ἑσώς, Ion. *ῥηός*, Dor. *ῥαός*, Lesb. *ῥαῖος* (= *ῥαFFος*) 'habitation of a god, temple' from **ῥas-fo-s* < **nos-wo-s*, Hom. *ῥαίω*, aor. *ῥάσ-σαι* 'to live, to habitate, have a habitat, settle' from **nos-*: Gr. *ῥέομαι* 'to go, come, return (home)', *ῥόσ-τος* 'return home' from IE **nes-/*nos-*.
ἐμπαξ, -ακος 'unripe (grapes, olive etc.)' from **ḡ-pokw-s*: Gr. *α-* from **ḡ-* and Gr. *πέπων* 'ripe' from **pek-wō(n)*, Skt. *pacyate* 'to ripen' from **pek-w-*.
ἐμβρος 'water, rain' = Gr. *ἀφρός* 'scum', Skt. *abhrá-h* 'clouds' from IE **ḡbhro-s*, L. *imber* 'rain' from IE **ḡbhr(i)-*.
πέσραμον n., *πέσραμος* f. 'citadel, tower' from **bhergho-mo-*: G. *Berg* 'mountain' from **bhergho-*, *bergen* 'to take away, to hide', see *πύργος*.
πλινθος f. 'brick, tile' from **φλιντος* (cf. *πάθνη* instead of *φάννη*, Att. *ἐνθαῦθα* = Ion. *ἐνθαῦτα*, Att. *χαλκός* = Cret. *καυχός*, etc.): OE. *flint* m., Otr. *slind* 'brick' from IE *(s)*plind-* 'to split'.
πύθδα 'bottom': Gr. *πυθμήν* 'bottom', Skt. *budhná-* 'bottom, base' from IE **bhu(n)dh-*.
πύργος, see above.
ῥέγγω 'to snort, snore' from **srenk-*, *ῥύγχος* m. 'pig's snout, snout, bill' from **srŋk-*: Gr. *ῥέγκω* 'to snore, snort', Otr. *srennim* 'to snore' from **srenk-nā-*.
ῥόδον 'rose' from **wrdho-m*: Pers. *gul*, Arm. (from Pers.) *vard* 'rose', OE. *word* 'briar' from **wrdh-*.
σεῖας n. 'light, brightness' from **swelos*: Skt. *svarati* 'shines, burns', OE. *swelan* 'to burn'. If this word were Greek, it would have been **εἶλος*, cf. *εἰλη*, *εἴλη* 'sunshine, sun, warmth'.
σελῖς 'seat (board) in a boat', *σέλιμα* n. 'beam; deck; seat (board) in a boat': OHG *swelli* 'beam, threshold'.
σιγή 'silence': G. *schweigen* 'to keep silent' from IE **swigh-*.
σῖτος 'grain, wheat, hread' with *st* > *l* (?): Goth. *hwaiteis* 'wheat' from **kweyd-*, **kwoyd-*.

σμήνθος m. 'mouse' (Aesch., etc.), *σμήνθα* and *σμός* 'mouse' (Hesych.) from IE **smī-* (*yo*)*nt-* 'gnawing, rodent': Gr. *σμή-λη* 'knife', *σμή-νός*, *σμήννη* 'hoe, mattock', Lett. *smicens* 'mouse'.

σῦλον, *σύλη* 'right of seizure' from **sl̥-wo-m*, **sl̥-wā*, *συλιάω* 'to strip off; rescue': Gr. *ἐλεῖν* 'to get, to grasp, to take away', OIr. *selb* f., Cymr. *helw* m. 'belonging' from **sel-wo-*, *σῦς* = Gr. *ῥίς* 'swine' from **sū-s*.

σνφε(ν)ός, *σνφός* 'hogsty' from **su-pā-(y)io-s* and **su-p(y)o-s*, cf. Pel. *σῦς* 'swine', L. *pā-sco* 'to graze', Gr. *σν-φροβός*, *σν-βώτης* 'swine-herd', Skt. *pāyu-* 'sentinel', *gō-pā-* 'cow-herd', Arm. *hoviw* (PIE **xewi-peh-*) 'shepherd'.

ταχύς 'quick' from **toku-s* = Skt. *taku-hi* 'quick'.

τέμνωθος (Harpocr., Aristot., Theophr., etc.), *τέρεβνθος* (cf. *Τερεβνθεύς*, an epithet of Apollo), *τερεβνθος* (Theophr., etc.) = *τερέμνωθος* (cf. *τερεβνθιος* Xen., etc.), *τερέμνωθος* (Nic.) 'terebinth tree from which one obtains aromatic resin or turpentine by making cuts in the trunk; resin, pitch'⁷⁹ from **derw-en-to-*: Olcel. *tjara*, OE. *teoru* and *tierwe* 'pitch, resin', Lith. *dervà* 'pine tree' from **derw-*.

τύμβος 'tomb' = Gr. *τάφος* 'tomb' from **dh̥mbho-s*.

τῦρος 'tower, citadel': Skt. *dr̥h-yati* 'fortifies' from **dh̥rgh-*.

φειλλεύς, *φειλλεύς* n. 'stony ground', *φειλλά* *ἔθου* *τραχεῖς* (schol. Clem. Al.) from **pels-*: Gr. *πέλλα* 'stone' from **pelsā*, G. *Fels* 'rock'.

πιαρός 'gleaming, shining': Gr. *πιαρός*, *πτερός* 'fat, rich', Skt. *pīvara-* 'fat, stout'.

φῶκος 'seaweed, red color (obtained from it)': Mod. Icel. *fuki* 'smell; rotten seaweed' from **pug-*.

φύλαξ, *φύλακός* 'guardian (*doorman)' from **pul-* or **pl̥-okw(o)-s*: cf. Gr. *πύλη* 'door', and IE **okw(o)s*, cf. Gr. *ᾄσσομαι* 'to see, to watch', *ᾄσσε* dual 'eyes', L. *oc-ulus* 'eye'; cf. Gr. *πύλ-ωρός*, Hom. *πύλα-ωρός* 'doorkeeper, guardian', *θυρ-ωρός*, Hom. *θυρα-ωρός* 'doorman, guardian', *ᾄσσω* 'to see, to watch'.

The most characteristic features of the comparative-historical phonology of the pre-Greek language (Pelasgian), as determined by the most certain etymologies of the words and proper names, are given in Table 5.

Table 5
Characteristic Features of the Comparative-Historical Phonology of the Pre-Greek Language (Pelasgian)

Indo-European	Pelasgian
<i>e</i>	<i>e</i>
<i>en</i> + consonant	<i>in</i>
<i>o</i>	<i>a</i>
<i>u, m</i>	<i>un, um (on, om)</i>
<i>r, l</i>	<i>ur, ul (or, ol)</i>
T(enues)	TA(aspiratae)
M(ediae)	T
MA	M
<i>k'</i>	<i>s, š</i>
<i>g', g'h</i>	<i>z, d (d)</i>
<i>s-, -s-</i>	<i>s-, -s-</i>
<i>sw-</i>	<i>s-</i>

⁷⁹ Turpentine is obtained from the resin of the pine tree.

The phonematic system of Pelasgian is very similar to that of Thracian (see section 4.2.2).

Explanation of the pseudo-pre-IE suffixes in the Greek language, as well as of the toponyms which earlier were considered to be the main evidence for the pre-IE substratum in the Aegean region, was achieved by the same method (see sections 5.10.1-2).

In general this new application of the comparative-historical method opens new possibilities for etymology. For example, towards the middle of the 19th century Pott, Schleicher (1861-62: 243), and Curtius (1858-62: 408) connected L. *sapiens* 'wise' with Gr. σοφός 'wise'. Later this comparison was refuted as being impossible since it contradicted the phonematic laws of the Greek language: initial IE *s* before a vowel had shifted into aspiration in Greek, the Greek vowel *o* could not correspond to the Latin *a*, and the Greek consonant *φ* and the Latin *p* have no clear connection. For this reason this etymology disappeared from the etymological dictionaries. From our point of view, i. e., considering it to be "Pelasgian", σοφός can indeed be connected with L. *sapiens*. As the derivative ἀ-σύφ-ηλος 'in-sapiens' shows, σοφός is derived from an older *συφός through the assimilation of *u—ó > o—ó*: thus "Pelasgian" σοφός comes from **supo-s* and is related to "Pel." σαφής 'clear, plain' from **s(w)ap-ēs*, L. *sapiens* 'wise' from **s(w)ap-*, Hitt. *suppi-* 'clean, sacred' from **sup-*: IE **s(w)ap-* and **sup-*.

This thesis, which originally was accepted with a certain scepticism,⁸⁰ gradually began to be given approval.⁸¹ Some of the linguists who had taken a negative stand later changed their opinions and accepted the basic principles of this theory.⁸² Some linguists — among others Van Windekens,⁸³ Haas (1951, 1959b), Merlingen (1953; 1955a; 1962), Carnoy (1955; 1957), Harmatta (1964), Sakellariou (1977) — used it as a basis for some of their works. Gindin (1959) published a good bibliography on "Pelasgian".

⁸⁰ Cf. Krahe 1954: 158-159: "Die Aufnahme der Theorie vom idg. Charakter des 'Pelasgischen' seitens der Mitforscher war... recht verschiedenartig und bewegte sich in mannigfacher Abstufung zwischen skeptischer Ablehnung und enthusiastischer Zustimmung." Van Windekens (1952, VII) explains this fact with "the newness of this kind of research".

⁸¹ Van Windekens (1960: V) wrote: "About twenty years ago, Georgiev's thesis about the existence of an IE language in pre-Greek Greece was generally considered to be absurd: it was in 1955 that Ruipérez (1955: 161) wrote that this thesis "is accepted at least as far as its essence was concerned by a great number of linguists", while in Sundwall's (1954: 310) article the following is stated about the language situation in pre-Greek Greece: "that this linguistic region had an Indo-European character is now generally accepted." "Obviously"—the author concluded — "in recent years the views on the pre-Greek linguistics have changed considerably". See Adrados 1952: 536-537; Budimir 1937: 283-284; Brandenstein 1937: 722-723; 1938a: 292-293; 1954: 9.22-23; von Blumenthal 1937: 240-241; Čihaj 1952: 586-587; Desnickaja 1952: 41-42; Gelb 1954: 107; Gornung 1954: 107-108; Thumb and Hauschild 1958: 39, 283; Hestermann 1954: 325-326; E. Hofmann 1955: 128; Heubeck 1958: 196-197; Hoenigswald 1943; Hiersche 1970: 33-35; Hoffmann and Scherer 1969: 19; Ivanov 1955a: 124-125; D. M. Jones 1953: 49; T. B. Jones 1954: 217; Katičić 1963; 1964a: 28-29; Krahe 1954: 158-159; Kronasser 1960: 177; Lochner-Hüttenbach 1960: 95-96; Machek 1950: 243-244; Mayrhofer 1960: 96-97; Rosenkranz 1950: 336-337; Ruipérez 1955: 161; Sakellariou 1977; Schmoll 1958: 52; Sundwall 1954: 310; Tonev 1939: 230-231; Tovar 1960: 36-37; Untermann 1956: 57; etc.

⁸² Cf. Krahe 1943a: 10-11 and 1954: 157-158.

⁸³ In many articles and two books from 1950 onwards.

At the beginning Kretschmer (1938: 2-3) took a negative stand, which is not at all strange since accepting the new thesis would mean the end of his old theory. Nevertheless later he made considerable concessions, in spite of the fact that he tried (1939: 101-102; 256-257; 1940-43: 213-214; 231-232) to save some of his old conceptions. In an article published in 1943 he formulated the following hypothesis: so-called "proto-IE" was divided into two branches: IE and "Raeto-Tyrrhenian" (or "Raeto-Pelasgian"); Pelasgian, Tyrrhenian, Etruscan, and Raetic were derived from "Raeto-Tyrrhenian". The primitive homeland (*Urheimat*) of the Indo-Europeans was north Germany and the neighboring regions, while the primitive homeland of the "Raeto-Tyrrhenians" was contemporary Czechoslovakia and Hungary. Kretschmer (1940-43: 214) also declared that there was only a "difference in the degree of relatedness based on difference in time" between his conception and mine. Kretschmer's new hypothesis is improbable: it is a desperate attempt at preserving at all costs something of his old concepts by making some concessions to the new theory.

3.3.3. The Denomination "Pelasgian Language"

The investigations by Van Windekens, Haas, Merlingen, Carnoy, Brandenstein, Harmatta, Gindin, Sakellariou and others specified and solved some of the problems connected with this specific IE language and its position among the other IE languages. Nevertheless there are still many unsolved problems. The question of the position of this language among the other languages of the Aegean region and the question of its name are two important issues.

One problem is, where did the population which spoke this specific IE language live? Did these people live in the Aegean region or only in part of it, and when?

Brandenstein (1954: 22-23) thought that the population which spoke this language had come to the Aegean region towards the end of the Mycenaean period. This hypothesis is now obsolete since in the inscriptions in Linear B (14th-12th centuries B.C.), we find borrowings from the pre-Greek language, as, for instance, *asamito* = Att. ἀσάμινθος, *plā₂ra* = φάλη, *serino* (MY) = σέλινο(ν), *sito* = σῖτος, *su-* = σῦς; *watu* = Att. ὄρνις, and also some toponyms belonging to the same language, as, for instance, *korito* = Κόρινθος, *orumato* = Ὀρούανθος, classical Gr. Ἐρούανθος, etc. Thus this population lived in Greece before the 15th century B.C.

Merlingen (1955a: 39-45) tried to adduce evidence in support of the hypothesis that this language was spoken by the Achaeans who, moving southwards, conquered the Greeks and Greece probably before the end of the 15th century B.C. (or perhaps later). According to Merlingen, the Greeks later adopted the name of the invaders with whom they had merged. However, he does not specify the time when these Achaeans came to Greece.

The name Ἀχαιῶι does not have a convincing Greek etymology: it could have been borrowed from another language.⁸⁴ There are many examples of the transfer of ethnical names from one tribe or people to another.

⁸⁴ Cf. for instance Sakellariou 1965: 101; 1977: 231-43.

In his book *Praegraeca* (1961: 17-20) Heubeck introduced the assumption that the pre-Greek language was almost identical with Hittite-Luwian, "especially with their Western Asia Minor dialects, Lydian and Lycian" (1961: 19). This view is very similar to Goetze's old thesis on the Luwian origin of pre-Greek.⁸⁵

There are, in fact, data about the island of Crete and some other islands in the Aegean which indicate the existence of a pre-Greek language which was closely related to Luwian (and Lycian). But the pre-Greek language "Pelasgian", though it was related to Hittite-Luwian, was a separate IE language. This is clear from the toponymy. "Pelasgian" place names ending in *-vθ-* and *-σ(σ)-* are undoubtedly related to the Hittite-Luwian toponyms ending in *-nt/d-* and *-ss-* but, while the "Pelasgian" place names end in *-vθ-*, *-avθ-*, *-vvθ-* and *-ασ(σ)-/-ησ(σ)-, -ϊσ(σ)-, -ωσ(σ)-*, the Hittite-Luwian ones only have the forms *-ant/d-* and *-assa-*, rarely *-issa-*. This difference is quite old, as is evident from the place names in the Mycenaean texts: *korito* = *Κόρινθος*, *aminiso* = *Ἀμινισός*, *turiso* = *Τυλισός*, *konoso* = *Κνωσός*. This can be explained by the different phonematic changes which cannot be reduced to a common Hittite-Luwian form, cf. IE *-ent-* > Pel. *-vθ-* but Hitt.-Luw. *-ant/d-*, IE *-nt-* > Pel. *-vvθ-* but Hitt.-Luw. *-ant/d-*, IE *-ont-* > Pel. *-avθ-*, Hitt.-Luw. *-ant/d-*. Thus "Pelasgian", though closely related to Hittite-Luwian, is a separate IE language.

The evidence which proves that this reconstructed IE language is pre-Greek is the following:

(1) The Mycenaean texts written in Greek show that the people who developed the Mycenaean culture were Greeks. If another people with a higher culture had existed during this period, the documents would have been written in the language of this people and not in Greek. In the Linear B texts there are borrowings from the pre-Greek language. Therefore, the population speaking this language must have lived in Greece before the 14th century B.C.: this date is *terminus ante quem*.

(2) The typical borrowings from the pre-Greek language into Greek are the names of objects which could only have come from a highly developed culture, as for instance *ἄστυ*, *δοάμινθος*, *νεώς*, *πύργος*, *τύρσις*, etc. Furthermore, the Greeks borrowed many names of gods from the pre-Greeks. The name of the ancient Aegean goddess Att. *Ἀη-μήτηρ*, Dor. *Ἀἰ-μᾶτηρ* 'mother-earth' comes from pre-Greek *ḍā* from **(g^h)d^hā* or **(g^h)d^h(om-s)* 'earth'. If this name were of Greek origin, it would be **Χθω-μᾶτηρ*, cf. Gr. *χθών* 'earth'. Hence the people speaking pre-Greek were obviously the people who developed one of the earlier stages of the Aegean civilization. Thus the pre-Greeks were the people who developed the Early Helladic civilization which began towards 2800 B.C.

(3) The old theory about the presence of a pre-Greek population of non-IE origin in the Aegean region was based on the fact that a great number of toponyms from this region cannot be explained as being Greek. The population of this area increased and started to carry on a comparatively settled way of life during the **Early Neolithic Period**. This is the period during which the most ancient toponymic layer was formed, i. e. mainly the place names in *-vθ-* and *-σ(σ)-*: we do not know of any older

⁸⁵ Goetze's thesis is supported by Palmer (1965: 337).

toponymic layer. These toponyms belong to the reconstructed IE language described above. Consequently, this is the IE pre-Greek language which was spoken in this region from at least Neolithic times.

Therefore, the population which spoke the reconstructed pre-Greek IE language must have been one of the most ancient peoples in Greece. This population can be identified with the Pelasgians (*Πελασγοί*). The following considerations support this assumption:

(1) The ancient writers considered the Pelasgians to be the pre-Greek population of the Aegean region and a people who had developed a high culture (cf. Hom. *δοῖαι Πελασγοί*). The following passages from Herodotus and Thucydides are especially significant.

Herodotus II, 56 ... τῆς νῦν Ἑλλάδος, πρότερον δὲ Πελασγίης καλενυμένης τῆς αὐτῆς ταύτης...

Thucydides I, 3: ... πρὸς... τῶν Τρωϊκῶν οὐδὲν φαίνεται πρότερον κοινῇ ἐργασμένη ἢ Ἑλλάς· δοκεῖ δέ μοι, οὐδὲ τοῖνομι τοῦτο ξύμπασά πω εἶχεν. ἀλλὰ τὰ μὲν πρὸ Ἑλλήνων τοῦ Δευκαλίωνος αὐτῆς, κατὰ ἔθνη δὲ ἄλλα τε καὶ τὸ Πελασγικὸν ἐπὶ πλεῖστον ἐφ' ἑαυτῶν τὴν ἐπωνυμίαν παρέχεσθαι, Ἑλλήνων δὲ καὶ τῶν παίδων αὐτοῦ ἐν τῇ Φθιώτιδι ἰσχυρόντων...

(2) From the Homeric phrase Ζεῦ ἄνα Δωδωναῖε Πελασγικέ (*Iliad* XVI, 233) it is clear that the Pelasgians worshipped Zeus, a god of IE origin. This fact is in support of the IE origin of the Pelasgians.

(3) Herodotus (II, 50) tells us that the Greeks borrowed names of gods from the Pelasgians. The name of the ancient Aegean goddess *Δημήτηρ* may be explained as a pre-Greek name: it probably was one of the Pelasgian borrowings to which Herodotus refers.

There are good reasons for supposing that the older form of the name of the Pelasgians was *Πελαστοί. In the *scholia* to the *Iliad* (XVI, 233) one finds *Πελαστικός* instead of *Πελασγικός*. Moreover, Hesychius informs us that the Athenians pronounced it *Πελαστικός* instead of *Πελασγικός*. The name *Πελαστοί was moulded into *Πελασγοί* according to folk etymology as a derivative of *Πελαγσκοι 'πέλαγιοι, sea people' from πέλαγος n. 'sea'.⁸⁶

The name *Πελαστοί can be identified with the Old Hebrew *p^elišt-im* (-im is the ending for the plural), Assyrian *palāšta*, *pilištu*, and Egyptian *pršt*, i. e., with the **Philistines** in the Bible. According to Biblical tradition, the Philistines had come from the island of Crete. The French archaeologist Berard (1952) confirmed this thesis with archaeological data. Dussaud (1953: 86) vocalizes the Old Hebrew form of this name as *Pelašet* and the Egyptian form as *Pelsata*.

Thus the Pelasgians migrated from the Aegean region to Palestine, the territory to which they gave their name. During the Mycenaean period they played an important role in this region but thereafter were assimilated by the Hebrews (and the Phoenicians?).

⁸⁶ -γσκ- > -σγ-, cf. *μίσγω* from *μυγσχω and *λόγος* from *λγσκος, see Boisacq 1923 s. v.

The Ancient Languages in the Central and Northern Parts of the Balkan Peninsula

4.1. Principles of the Etymology of the Proper Names

The degree of affinity between the IE languages is established on the basis of the specific features of their comparative grammar, including the phonological system and the vocabulary as analyzed from the etymological point of view.

But there are IE languages which are not very well known, for instance Thracian, Dacian, and Phrygian; the linguistic material of these languages consists of several tens of glosses, several hundreds of proper names, and some inscriptions. When attempting to characterize such a language from a linguistic point of view the etymologies of the glosses and of the proper names have to be taken into consideration. In order to establish a convincing etymology for a proper name the following principles should be considered:

(A) The etymology is certain if it explains the **entire word**, if there are exact corresponding forms in the other IE languages. "Root etymologies" have no scientific value.

(B) The etymology of a proper name is certain when its meaning can be explained according to the **combinatory method** without taking its etymology into consideration.

The principles for establishing the meaning of the proper names with the help of the combinatory method are the following:

(a) *Real or pseudo-translation*: a population living in a given region gives names to the geographical places according to their **characteristic features**; if an old (autochthonous) population happens to disappear, the new population gives names to the same place according to the same principle, so that the new names seem like a translation of the previous ones. In some cases they are actual translations. Examples are:

**Aξιός* (Ael.) is the name of a tributary of the **Ιστρος* (Danube) in Scythia Minor (contemporary Dobrudja), while **Αξιόπια* (Proc.), **Αξιούπολις* (Ptol., etc.), *Axiupolis* (TP, ND) is a town at the mouth of this river; **Aξιός* (also **Aξιός*; attested since the *Iliad*) and **Αξιός* (schol. to Ptol.), now called Vardar, is the name of the largest river in Macedonia.

On the basis of the contemporary name *Cernavoda* (= Bulg. 'black water') of the town (and the river) 'Αξι-οπα, 'Αξι-ούπολις, and on the basis of the fact that the main tributary of Vardar is called Bulg. *Crna (reka)* 'black river', one must conclude that 'Αξιος, 'Αξιός comes from **h₂-ks(e)y-* 'dark, black', cf. Av. *axšaena-* 'dark, black' from **h₂-ksey-no-*: prefix *a-* 'no' and *xšay-* 'to be brilliant, to shine', Iran., Dac. *Πόντος* 'Αξεινός (later *Εὔξεινος*) 'Black Sea' and -οπα from **upā*, **upolis* (diminutive) = Lith. *ūpe* 'river', *upėlis* (diminutive). The contemporary name of the same Vardar River, the ancient *Βαρδονάριος*, *Οὐαρδάριος*, *Βαρδάριος* (schol. to Ptol.), is derived from **sword(o)worī* 'black water', cf. Goth. *swarts*, G. *schwarz* 'black' from **swor-do-* and Skt. *varī* f. 'water'. The second name of the river is also (Daco-) Mysian: it was originally the name of the largest tributary of the 'Αξιος, whose contemporary name is *Crna* 'black'.

Σαλδο-οισσηνος, *Σαλδο-ουισσηνος*, *Σαλδουισσηνος*, *Σαλτουισσηνος*, *Σαλτο-βουσηνος*, *Σαλδο-βυσσηνος* as well as *Σαλδο-κεληνος* are epithets to Asclepius in inscriptions found near the spring of *Glava Panega* (NE from Sofia in Bulgaria). The form *Σαλδηνος* is recorded at the same place as an epithet of Asclepius, Hygeia, and Artemis; *Saldæ-caputenus*, *Salte-caputenus*, an epithet of Heros and Silvanus, are also recorded. The suffix -ηνος is used to form ethnicons (and adjectives): these epithets are derivatives from toponyms. *Glava Panega* is the spring of the *Zlatna Panega River*: in Bulgarian *glava* means 'head; spring'. It is clear that L. -*caput(-enus)* 'head; spring' is the translation of the Thracian name, as well as the Bulgarian word *glava* 'head, spring' in the name *Glava Panega*. Thus *sald-*, *salt-*, *σαλδ-*, *σαλτ-* corresponds to Bulg. *zlat(en)*, Russ. *zolotoj* 'golden' from **g^hol-to-*, *wis(a)-* (= -οισση-, -ουισση-) corresponds to Skt. *viṣam* n. 'water', *veṣati* 'pours out', and -κελ(λ)η- corresponds to G. *Quelle* 'spring' from **g^welnā*.

Σουη[ουληνος], *Σουτουληνος* is an epithet of a god (Heros) which is mentioned in two inscriptions. This epithet is derived from a place name by the suffix -ηνος. The first inscription was found at *Akça-kayrak*, which in Turkish means 'white tablet'. Thus *Σουη[ουλ]-*, *Σουτουλ-*, i. e. *swētul-* or *switul-*, corresponds to OBG *svētülū* 'bright' from **k^woyt-ulo-s*.

Γέρμας, *Γερμάη(-αι)*, *Γερμινός*, *Γέρμενε*, *Γερμανία* was the name of a town in the region of Pautalia (contemporary Kjustendil); it is now called *Saparevska banja* and is known for its **hot springs**. The name is still preserved in the name of the *Džerman River* (*Germanistica*, 1378 A. D.): *ge* > *dže*. *Γέρμη*, *Γέρμαι* is the name of a town near the Dardenelles. Ptolemaeus (5, 4, 5) mentions *Γέρμα ἢ Θέρμα πολωνία* in Galatia (Asia Minor). The fact that *Γέρμα* was also called *Θέρμα* (= Gr. *θερμά* n. pl. from *θερμός* 'hot') and the fact that there are hot springs in this town clearly show that the Thracian word *γερμ-* means 'hot' and corresponds to the Gr. *θερμός* 'hot' from IE **g^{wh}erm-*.

Asamus (Pliny), 'Ασημῶς (Prisc.), 'Ασημα f. sing. or n. pl. (Theophylactus Simocatta), Bulg. *Osām*, is the name of a tributary of the Danube in north Bulgaria. Folk etymology has had some influence in 'Ασημα, 'Ασημῶς, namely the connection with the Greek adjective ἄσημος. The upper part of *Osām River* is characterized by a stony bed and the river carries stones; also, the steep right slope of the river is rocky in many places. The *Kamenica River*, literally 'stony river', is near the *Osām*: such names are typical of rivers which have rocky beds or which carry stones. The name *Asamus* is

the same as the name of the Dalmatian town *Asamum*, which is interpreted as 'stone, rocky place' on the basis of its name *Lapida* during the Middle Ages (Croatian *Lapad*) from L. *lapis*, *-idis* 'stone'. Thus *Asamus*, *Asamum* are derived from **akmō(n)* 'stone' or **akm-yo-* 'stony' with an epenthetic *a*, cf. Skt. *aśman-* 'stone'.¹

Salmorude (JA; 3rd-4th century A. D.) and *palus Salameir* (Chronicon Roncalense) is the name of a salty lake (or marsh; now called *Razelm*) and of a castle to the south of the delta of the Danube in contemporary north Dobrudja. The same lake and the castle are mentioned in other sources under the Greek names *'Αλυμυρίς*, *'Αλυμυρίς* 'salty lake' (Proc., Hierocl., Const. Phorph.; Pliny). On the basis of the Greek name, which is a translation of the Dacian name, as well as on the basis of the fact that this is a salty lake, the meaning of the Dacian name can be established. *'Αλυμυρίς*, *'Αλυμυρίς* is a derivative of *άλμυρός* 'salty' from **salmuro-s*. Thus the names *Salmor-ude*, *palus (lacus) Salameir* contain the Dacian adjective **salmur(a)-* = Gr. *άλμυρός* 'salty': *Salmor-ude* is a Dacian compositum while *palus (lacus) Salameir* is the partial Latin translation of the Dacian *Salmor-ude*. Hence the meaning of *-ude* corresponds to *palus* 'marsh' or *lacus* 'lake'. Thus the Dacian word *-ude* comes from **udō(r)-* Gr. *ὑδωρ*, Umbr. *utu(r)* 'water': the phonetic change *ō (> ō) > e* is typical of the Albanian, which is the descendant of Daco-Mysian.

Κοίρος (Const. Porph.), *Grisia* (Iord.), *Gresia* (GR) now Rum. *Crișul*, Hung. *Körös*, a tributary of the Tisza River. As the contemporary names Rum. *Crișul Negru*, Hung. *Fekete-körös* (Rum. *negru*, Hung. *fekete* 'black') show, the ancient name can be explained from **k(ω)rhso-s* 'black', cf. Bulg. *čer* from **k(ω)rhso-s*, Skt. *kṛṣṇa-h* 'black', etc.

Anthroponyms and theonyms can also be explained with the help of the combinatory method. The following is an example.

The Thracian (and Phrygian) epithet of Dionysius-Bacchus was *Σαβάδιος* or *Σαβάκιος* (*di* shifted into *zi* in Dacian and Thracian as in Rumanian, a phenomenon inherited from the Dacian substratum). The characteristic epithet of this god is Gr. *Ἐλεύθερος* = *ἐλεύθερος* 'free', L. *Liber* = *liber* 'free'. Therefore *Σαβάκιος* is identical with the OBG *svobodī* 'free' from **swob^hod^(h)io-s*.

The combinatory method can be also applied to the etymology of glosses, as the following example shows:

The plant which in Dacian is called *διέσσημα* 'common mullein' (Diosc.) is also called *diesapter* (Pseudo-*Ap.*). From these two similar names for the same plant one may conclude that they are composita in which the first element is *διεσ-* = *dies-*, and the second *-ημα* and *-apter* probably are synonyms. The same plant is called *λυχνίτις* in Greek, a derivative from *λύχνος* 'lamp, torch',² also *φλόμος* from *φλογμός* 'flame', G. *Himmel(s)-brand*, *Fackelkraut*, *Königs-kerze*, *Marien-kerze*. Jokl (1929) interprets the first member of *διέσσημα* as a synonym of G. *Himmel(s)-brand* from IE **di(y)es* = L. *diēs* 'day, light, sky'. He derives the second element from **ews-my* 'burning (Brand)', a derivative of **ews-ō* 'to burn', cf. Gr. *εἶω* = L. *urō* from **ews-ō*. The phonetic changes *ew > e*, *sm > m* and *η > a* are attested in Dacian and Albanian. The second element of *dies-apter* is derived from a verb with

¹ Cf. also the Iranian names of the rivers in the southern European part of the USSR: *Osmon*, *Asmon*, *Kamennaja* (stony) *Asmonka* from Iran. *asman-* 'stone'.

² A plant whose leaves, after they are dried, are used for torches.

the meaning 'to burn' and is related to Gr. *ἄπτω* 'to light, burn', *ἄπικα* 'wick', *ἀπὴ* 'lighting'.

(b) The names of rivers usually hide an appellative with the meaning of 'water, river, stream': this is the most ancient way of forming river names. One can explain the name of the *Utus* River from **udō(r)* 'water' in this way.

(c) The most ancient names of tribes are often derived from appellatives with the meaning of animals-totems of the tribe.³ Examples are:

Δᾶοι (*Δάοι*, sing. *Δᾶος*, L. *Dāvus*) 'wolves', cf. Phryg. *δάος* 'wolf', OBG *daviti* 'to choke, to stifle, to strangle'.

Δάκαι (*Δάκαι*, *Δᾶκοι*, *Δάκοι*, *Δάκες*; the name is known since the 2nd century B.C.); this is a later form of the name for the tribe *Δᾶοι*;⁴ it is derived from **d^hāw-ko-s* which is a derivative from **d^hāwo-s* 'wolf': the shift *aw* > *a* is typical of the Dacian and Albanian languages.

Βέβρονες was the name of a Bithynian tribe which lived on both sides of the Bosphorus (Ar., Theocr., etc.); it means 'beavers', cf. Lith. *bēbrus*, G. *Biber* 'beaver' from **b^heb^hru-s*.

Βουναῖοι, the name of a Bebrycian tribe (St. Byz.), is related to Gypsy *buzni* 'goat', G. *Bock* 'buck' from **b^hugno-*.

In the ethnicon *Βυζάντιοι* (Hdt., Thuc., etc.) and in the toponym *Βυζάντιον* we find the name of the tribe *Βύζαντες* 'bucks', cf. Av. *būza-* m. 'buck' from **b^hūgo-s*, Arm. *buz* 'lamb'. The suffix *-(a)nt-* is probably = Hitt. *-ant-* (see section 6.2.1).

Personal names of totem origin are older than the dithematic anthroponyms. In Thracian both types appear, cf. *Βύζας*, *Βύζης* 'buck', *Δερεις* 'deer', etc. (see section 4.2.1.2).

(d) In some cases there are no possibilities for interpretation of proper names by these methods. In such cases all we can do is to look for the most ordinary meanings on the basis of the comparative-historical method. Such interpretations are more or less hypothetical.

And thus there are a number of glosses and proper names in Thracian, Dacian, and Phrygian whose etymology is certain or very probable. This makes it possible to establish the main features of the comparative-historical phonology of these languages. Let us analyze their linguistic data separately.

4.2. Thracian

During the first quarter of the 20th century our knowledge of the Thracian language was based on the works of the Viennese scholar Tomaschek. Tomaschek (1893-94) tried to collect all the material on this language which had been made available up to the end of the 19th century. Meanwhile a great number of Greek and Latin inscriptions and papyri were discovered: in these documents Thracian names were found which to a considerable extent complemented and partially amended the material compiled

³ Cf. *Δαύνιοι* and *Βοῦνιοι*, tribes in southern Italy, from IE **d^hāwno-* 'wolf' and *b^hren-* to- 'deer', see Kralje 1955: 113; Georgiev 1963 c.

⁴ Cf. Detschew 1957: 116.

by Tomaschek. Some short Thracian inscriptions were also discovered. Furthermore there were new achievements in the studies of the toponymy of the southern part of the Balkan Peninsula. In 1957 Detschew's book *Die thrakischen Sprachreste* was published; it is a collection of all the Thracian material. This work completely replaced Tomaschek's collection and opened new possibilities for investigating this language.

4.2.1. The Thracian Vocabulary

The Thracian material at our disposal is, altogether, about forty glosses, about 1500 proper names, some short inscriptions from Thrace and from the island of Samothrace, and several words which are found in the vocabulary of the contemporary Balkan languages.

The Thracian vocabulary, which was established on the basis of the glosses and of the most convincing interpretations of onomastic data, is as follows.⁵

4.2.1.1. Glosses with a Well Established or Quite Probable Etymology

ἀσᾶ *ἄσσορφυλλον, πετρούνη, πετροώνιον* (Diosc.). On the basis of the Greek word Tomaschek explained ἀσᾶ from **ak-yā*, cf. Lett. *ass* 'sharp, pointed'.

βόλυνθος 'bison, wild bull' (Aristot.), from **bhlyn-ent-*, cf. Olcel. *boli*, OE. *bula*, G. *Bulle* 'bull' from **bhlyn-ēn* (or-*ōn*), Gr. *φᾱλλός* 'penis' from **bhlyno-s* or **bhlynyo-s*. The suffix -*νθ-* corresponds to Slav. -*et-* in OBG *telę* (gen. *telęte*) 'calf' from **tel-ent-*, Bulg. *biče* 'young bull' from **bhuk-ent-*, etc.

βόλα *ῥοίλιν, city* (Strabo, St. Byz., Hesych.) from **wriyā*, cf. Toch. A *ri*, B *riye* 'city' from **wriyā*.

βόλζα 'grain crop, rye' from **wriġh-*, cf. Skt. *vrihi-h*, Pers. *birinj*,⁷ *gurinj*, Afghan, *uriže* 'rice'.

βρονχός *ῥυθᾶρα* (Hesych.) from **bhrŋko-s*, cf. Pol. *brzeċ* 'sound, din', Ukr. *brjak* 'sound, sound of bells' from **bhrŋko-s*, Russ. *brjacat* 'to sound, to resound'; Gr. *φρόγγος* *ῥυθᾶρα* (-*ος*, Aeol.) is from the same root, namely from **bhrm-i-*.

βρῦτος m., βρῦτιον n. 'a kind of beer made of barley' (Archil., Hecat.); βρῦτος, βρῦτιον (Hesych.); βρῦτα (-*α* n. pl.) *ῥα στέμματα* (Athen., Ar., Hesych.); βρῦτος comes from **bhruto-*, cf. Anglo-Saxon *brod*, OHG *prod* 'broth', L. *dē-frutum* n. 'grape juice'.

ῥένιον *ῥορέας*, meat' (Eust., Herodianus, Hesych., Suid.), ῥένια = ῥένια (Call., Nic) from **gwhen-to-*.

din-upula (Bessian) = Dac. *κινούβουλα*.⁶

ζαίμος 'skin' (Porph.), cf. Skt. *śarman-* 'roof, cover', Goth. *hilms* 'helmet'.

ζετραία 'pot' (Pollux; see also Hesych.), cf. Gr. *χῦτρα* 'pot' (borrowing from Daco-Mysian ?).

ζήλας, ζελᾶς (Choerob.), ζελά (Phot.), ζίλου (Hesych.) 'wine' from **ghēlo-*, cf. Skt. *hālā* 'brandy', Gr. *χάλις* 'pure wine', Mac. *κάλιθος* *οἶνος*. *ῥαυγίας* (Hesych.). Probably from **ghē(w)-lā* 'juice', cf. Gr. *χῦλος* 'juice', *χῦμός* 'juice': **ghew-*, **ghū-*.

οκάλμη 'sword, knife' (Soph., Marc. Ant., Hesych., Phot.) from **skolmā*, cf. Olcel. *skolm* f. pl. 'sheath'.

⁵ See Jokl 1929; Brandenstein 1936b; Dečev 1960; Barić 1954; Detschew 1957; Georgiev 1957b; 1977.

⁶ See sections 4.3.2 and 4.3.3.

4.2.1.2. Words Established through Interpretation of Proper Names

Below is a list of those Thracian words which can be established with probability from proper names according to the principles mentioned above.

αιζ- 'goat' (toponym: *Αἰζική*) = Arm. *aic*, Gr. *αἶξ* 'goat'.

απα 'water, river' (toponyms *Μεσο-άπιον ὄρος*, *Burd-apa*), cf. Skt. *āp-* f. 'water', OPruss. *ape* 'river'.

αρζ- 'white' (river name: *Ἀρζος*, *Arzos*, *Arsus*), cf. Gr. *ἀργός* 'white'.

as(a)m- 'stone' (name of the *Asamus* River), cf. Skt. *āsman-* 'stone' (see section 4.1).

βεβρυ(α)- 'beaver' (*Βέβρυκες*, a tribe), cf. Lith. *bēbrus*, OHG *biḥar* 'beaver' from **bhebhru-s*.

βεργα 'bank, hill, mound, mountain' (toponyms *Βέργα*, -η, *Βεργούλη*), cf. OBG. *brëgi* 'bank', G. *Berg* 'mountain' from **bhergho-s*.

bersa- 'birch' (toponym *Bersamae*), cf. OBG *brëza* 'birch' from **bhergā*.

βουρδ-, *βουρτ*-, *burd(o)*- 'ford' (toponyms *Burd-apa*, *Βουρτου-δεζον*), cf. Bulg., Russ. *brod* 'ford'.

βρεντ- 'deer' (toponyms *Βρεντο-παρά*, *Brendice*) from **bhrento-*, cf. Mess. *βρένδον* (ντ > ρδ) 'έλαφον' (Hesych.).

βυζ(α)- 'he-goat' (cf. the toponym *Βυζάντιον*, the personal names *Βύζας*, -αντος, *Βύζης*, *Βυζος*), cf. Av. *būza-* m. 'he-goat' from **bhūgo-s*, Pers. *buz* 'goat, he-goat', Arm. *buz* 'lamb'.

βυρ-, *βουρ*- 'man' (personal names *Βουρ-κέντιος*, *Μουκα-βούρ*), cf. Alb. *burrë* 'man'.

γερμ- 'hot' (toponyms: *Γέρμας*, *Γερμή*, *Γερμανία*), cf. Gr. *θερμός* 'hot' from **gwhermo-s*.

-διζα-, *-διζος* 'fortress' (toponyms *Burtu-dizos*, *Βουρτου-δεζον*, *Oru-disza*, *Tarpudizos*), cf. OPers. *didā*- 'fortress' from **dhighā*, Gr. *τείχος* n. 'fence' from **dheygh-os*.

δρενις 'deer' (personal name *Δρενις*), cf. Alb. dial. *drëni* 'deer'.

εοβ-, *εζβ*-, *esb*- 'horse' (personal names *Esbenus*, *Εσβενιος*, *Εζβενις*, *Hezbenus*) from **ekwo-s* 'horse', cf. L. *equinus* 'belonging to a horse', Lith. *ašulenis* 'stallion'.

ζαλδ(α)-, *σαλδ*-, *σαλν*- 'yellow, golden' (ethnicon *Σαλδο-οικητος*, *Σαλδο-βυσ(ο)ητος*, etc.), see section 4.1.

-ζενης-, *-zens* (personal names *Αυλου-ζενης*, *Δια-ζενις*, *Muca-senus*, etc.) from **genēs*, cf. Gr. *-γένης* in *Διο-γένης*, etc.

ζηρ- = OBG *zverl* 'beast' and *ζηραινθ*- 'θηρίον' which corresponds exactly to the Bulgarian diminutive *zverē* < **ghwēr-ent-*, a diminutive from OBG *zverl*.

κελλη 'spring' (*Σαλδο-κελη*- 'golden spring', toponyms *Κέλλη*, *Κέλλαι*) from **gwelnā*, cf. OHG *quella*, G. *Quelle* 'spring' from **gwelnā*, Gr. *Δεῖλα*, *Δέλλοι*, a spring in Sicily, from **gwelno-*, cf. Detschew 1957 : 238. See Section 4.1.

-κενθ(ος)-, *-cent(us)* 'child, son' (personal names *Αυλου-κενθος*, *Aulu-centus*, *Βειθυ-κενθος*, *Bithi-centus*, *Dias-centus*, *Efta-centus*), cf. OBG *čedo* 'child'.

μουκα-, *muca*- (*μοκα*-) 'family, kin' (personal names *Μουκα-βουρ*, *Μουκα-ζενις*, *Μουκα-κενθος*, *Muca-por*, etc.), cf. Iran. **muka*-, Ossetian *muggae* 'family', *muggag* 'kin'.

-παυς-, *-pauς* (*Vitu-pauς*) = Att. *παυς* 'child, son', Hom. *πά(ν)ς*.

-por-, *-porus*-, *-πορις*-, *-πορας*-, *πουρις* 'boy, son' (personal names *Muca-por*, *Nato-porus*, *Αυλου-πορις*, *Ααλς-πορις*, *Muca-pora*), cf. L. *puer* 'boy, young man', *Mārci-por*, *Mārci-puer*, *Nae-por*, *Oli-por*, names of slaves, Dac. *per* 'son', see below (and Dac.).

ρησ- 'king' (**Ρῆος*, name of a Thracian king) from **reg-*, cf. L. *rēx*, Skt. *rājā* 'king'.

σαλνς- 'spring' Acta SS. Sept. 5,35 : (*Σάλνς* τῇ κόμῃ ὄνομα. 'Ἑλλήν γλώσσα βροθον αὐτὴν μεταφράσεται καὶ γὰρ ὑδάτων βροχνοὶ ἄφθονες πηγαί), cf. Lith. *salti* 'to flow'.

σερμη (river name *Σέρμη*, *Syrmus*; toponym *Σέρμη*), cf. Skt. *sārma-h* 'flow'.

σκαιβ-, *σκαι*- 'left' (tribal name *Σκαίοι*, *Σκαυβόαι*; toponym *Σκαῖος ποταμός*) = Gr. *σκαί(F)ός* 'left'.

σκαπη- (toponym Σκαπη-σύλη; ethnonim Σκαπιο-παρηνοι), cf. Gr. σκάπτω 'to dig'.
 σουητουλ(α)-, σουητουλ(α)- = OBG *svētülü* 'shining', see section 4.1.
 σπαρα 'spear' (personal names Σπαρά-όκοτος, Σπαρά-τακος, *Spartacus*), cf. L. *sparus*,
sparum 'short spear', E. *spear*.
 στρουμ-ων, στρουμη 'stream, river' (river name Στρυμών) from **srum*-, cf. E. *stream*.
 -συλη (toponym Σκαπη-σύλη) = Gr. *ύλη* 'forest'.
 συρ(ο)-, σουρα- 'hero, warrior' (personal names Σουρα-τραλεις, Συρο-τερεης) from **kuro-s*,
 cf. Skt. *śūra*- 'hero, warrior', Av. *sūra*- (and Dacian).
 wis(a)- (-ουισση-, -ουισση-, -υισση-, -βυση-) 'water (river)' (ethnicons Σαλδο-ουισσηνος, Σαλδο-
 οισσηνος, Σαλτο-βυσηνος from Σαλδο-ουισση-, Σαλτο-βυση- 'gold water'), cf. Skt. *viṣam* 'poison-
 water', *veṣati* 'overflows', river names *Wisara*, *Wisura* 'Weser', *Wiesaz* (Germany) <
 **Visantia* from **wis*-, **weys*-.

**uto* > *utu* 'water' (cf. *Utus*, Οὔτος river name) from **udō(r)*, cf. Gr. *ὕδωρ* 'water'.
 The most characteristic features of the comparative-historical phonology of the Thracian language, as determined by the most reliable etymologies of the glosses and of proper names, are given in Table 6.

Table 6
 Characteristic Features of Thracian

Indo-European	Thracian
<i>e</i>	<i>e</i>
<i>o</i>	<i>a</i>
\bar{a}	(\bar{a} >) \bar{e} (\bar{a}), dial. <i>a</i>
\bar{e}	\bar{e} > <i>i</i>
\bar{o}	\bar{o} > <i>u</i>
<i>aw</i>	<i>au</i>
<i>ew</i>	<i>eu</i>
η , η^l	<i>un</i> , <i>um</i> (<i>on</i> , <i>om</i>)
ϵ , ϵ^l	<i>ur</i> , <i>ul</i> (<i>or</i> , <i>ol</i>)
T(enues)	TA(spiratae)
M(ediae)	T
MA	M
<i>k'</i>	<i>s</i> , δ
<i>g'</i> , g^{lh}	<i>z</i> , δ (<i>d</i>)
<i>tt</i> , (<i>dt</i> , d^{ht})	<i>st</i>
<i>s</i> -, <i>-s</i> -	<i>s</i>
<i>sw</i> -	<i>s</i> -
<i>sr</i> -	<i>str</i>
<i>wr</i>	<i>br</i> (\bar{b} ?)

4.2.1.3. The Thracian Inscriptions

The Thracian inscriptions are discussed in detail in my book Georgiev 1977: 105-152. Here we shall deal only briefly in order to point out the possibilities for interpreting these inscriptions: actually the interpretation of the inscriptions cannot be considered to be absolutely reliable since the scarcity of the linguistic material does not permit of the application of the combinatory method.

4.2.1.3.1. The Inscription on the Gold Ring from Ezerovo

In 1912 a gold ring with an inscription on it was found in a Thracian tomb near the village of Ezerovo (district of Plovdiv). The Greek letters in this inscription are typical of the Greek writing from the 5th and 6th centuries B.C.; there are no spaces between the words (*scriptio continua*). On the basis of archaeological data it can be assumed that this ring is from the first half of the 5th century B.C. Thus far more than twenty attempts at interpretation have been published but not one can be accepted as completely convincing.

The gold ring and the other gold and bronze objects found in the tomb indicate that this was the burial of a person on which so-called *prothesis* was performed: a solemn exposure of the corpse before the burial according to Thracian custom.

The Thracians were accustomed to burying the wife together with the deceased husband. Herodotus says the following about the eminent (and rich) Thracians (οἱ κατέπερθε Κρησιωνάων) (V 5):

ἔχει γυναῖκας ἕκαστος πολλὰς· ἐπεὶ δὲ τις αὐτῶν ἀποθάνῃ, καί τις γίνεται μεγάλη τῶν γυναικῶν καὶ φίλων σπονδαὶ ἰσχυραὶ περὶ τοῦδε, ἥ τις αὐτέων ἐφιλέετο μάλιστα ὑπὸ τοῦ ἀνδρός, ἢ δ' αὖν κοιθῇ καὶ τιμηθῇ, ἐγκωμιασθεῖσα ὑπὸ τε ἀνδρῶν καὶ γυναικῶν σφάζεται ἐς τὸν τάφον ὑπὸ τοῦ οἰκηνοῦντος ἑωυτῆς, σφραγισσα δὲ συνθάπτεται τῷ ἀνδρί. αἱ δὲ ἄλλαι συμφορὴν μεγάλην ποιεῦνται· ὄνειδος γὰρ σφι τοῦτο μέγιστον γίνεται.

It could be assumed that the ring was prepared especially for the solemn exposure and that the content of the inscription was closely related to this Thracian custom. On the basis of these considerations the inscription can be interpreted in the following way:

Πόλιστερε, ἀσ(ν) νερε (ε) νεα τ(ι), ιλτεα, νησκαδ ἀραζεα δὲ μεαν τιλεξυπταμι, ιη εραζ ηλτα.

'Rolisten, I your (?) young wife, the chosen, am dying by the side of (you = near you) my lying in peace, (I) who brought up the children.'

Ρολιστερε (vocative) is the name of the deceased husband. Similar addresses to the deceased are very frequently found in Greek inscriptions on tombs. Cf. the personal (Dacian) name *Ρώλης*; *ο* = *ω*.

ασ(ν) = OBG *azū*, Lith. *aš* (*eš*), Av. *azəm* 'I'.

nere or *ner(i)* = Khotanian *nārā*, *nāri*, Skt. *nāri* 'spouse, wife', Av. *nāirī* 'spouse', Skt. *nar-* 'man', Alb. *njeri* 'man'; *e* (?) = Alb. *e*, copulative article (?).

nea = Gr. *νέα* 'new, young'.

t(i) or *t'* = Alb. *ty*, *t'*, *të*, Rum. *ti* 'tibi, tuus'.

ilte-a from **wltā-yā* pass. part. with the postpositive article = Skt. *vr̥tā* f. from *vr̥ta-* 'chosen'.

νησκαδ = Gr. *νήσκαω* 'I dic': *dhn* > *dn* > *n*; *ο* = *ω*.

αραζεα = ? *α(ν)* *ραζε-a* 'by the side'; *α(ν)* preposition, *ραζε* from IE **rogē(y)* loc. sing. from **rogi-* = Ved. *raji-* f. 'line, direction', cf. Low G. *reke* f. 'order'; *-a* postpositive article (?).

δο = L. *dō*, Lith. *do*, Anglo-Saxon *to* 'to' from **d(h)ō*, OBG, Bulg. *do* from **d(h)o*; *ο* = *ω*.

μεαν = L. *meum* acc. m. from **meyo-m*; *-n* from *-m* before *t-*, *ο* > *α*.

τιλε-ξυπταμι, a compound word from *τιλε* 'calmly', cf. Lith. *tylūs, tylas* 'calm', and *ξυπταμι* 'asleep, deceased' = Skt. *supta-m* acc. 'asleep' pass. part. form *sup-* 'to sleep'.

ιη (i. e., *yā*) = Gr. *ἡ* 'who' from **yā*, cf. Phryg. *ιως*, Gr. *ὅς* 'who', OBG *ja* f. 'this, who'; *ā* > *η*.

εραζ = *εράως* *τέκνα*. *Θεσσαλοί* (Hesych.) is probably a Thracian word in a Thessalian dialect, cf. also Phryg. *ερασι*, see section 4.4.1.2.

ηλτα, probably from **āl-to* 3rd pers. pret. mcd. from **al-*, cf. L. *alo* 'bring up, educate'.

This interpretation provides the following data about the comparative-historical phonology of Thracian: IE $\bar{a} >$ Thrac. η ; IE $\check{o} >$ Thrac. a ; IE $\bar{o} >$ Thrac. o ; IE $g^{(h)} >$ Thrac. σ ($= z$); IE intervocalic $s > z$; IE $y > i-$ ($= y$) but intervocalic y has disappeared; IE $-m =$ Thrac. $-m$ but $-n$ before $t-$; IE $d^h(w)n- >$ Thrac. $n-$.

4.2.1.3.2. The Inscription on the Gold Ring from Duvanlii

A gold ring with the figure of a horseman on it, which was found on the left hand of a skeleton in a tomb near the village of Duvanlii near Plovdiv, has the following inscription written on it:

HYS IH AEAE
MEZHVN AI

The first line is placed above the figure of the man and the second is under the horse. Several of the letters between IH and AEAE are illegible. This text can be interpreted in the following way:

Thracian text: *Hvs, ηη... δελε, Μεζηνν Αι.*

Translation: 'All powerful (or quick), help... keep, (oh) Horseman *Zsō* (voc.).'

Μεζηνν = nom.-voc., which is under the figure of the horseman, is the name of the Thracian god-horseman; it corresponds to the name (epithet) of the Messapian god *Menzana* (Jupiter), to whom horses were offered as a sacrifice. Both names are derived from **mendy-ān* 'horseman', a derivative of **mendi(o)-* 'horse'; they are related to Alb. *mëz-* 'stallion' and Rum. (Dac.) *minz* 'stallion'. The shift $\bar{a} > \eta$ ($= d$) is attested in Thracian.

ηvs = Hom. $\eta\acute{o}s$ 'good, brave, noble', Skt. $\bar{a}y\acute{a}-h$ 'lively, agile; m., god of vital power' from **āyu-s*; Thrac. ηvs is voc. like Skt. *dyanh, gauh, nauh, rah, bhuh, dhih*, where the vocative is the same as the nominative.

$\eta\eta$ 'help' from **yewe* imperat. with w disappearing between two identical vowels and contraction, cf. L. *iuvo*, OL. *iوو* 'to help' from **yewō*, Skt. *yuyoti* 'keeps away, wards off, separates'.

$\deltaελε$ = $\deltaαλε$, see below.

Αι voc. from Thrac. **Als* (or *Aw*) = Tarentinian *Als*, Messap. *Zis*, cf. Gr. *Zsōs*, dial. *Zīs*, Alb. *perën-di* 'god'.

4.2.1.3.3. The Inscription on Four Silver Vessels from Duvanlii

Four silver vessels which were found in a tomb and which contained the dust and bones of the deceased have the following inscription carved on them:

AAAAAEME

This text can be interpreted as follows:

Αα, δαλε με 'Earth, protect (keep = hold?) me!'

$\deltaα$ = Gr. (Pel.) $\delta\bar{a}$ 'earth', cf. Dor. *Δā-μᾶτηρ*, Att. *Δη-μῆτηρ*, Alb. *dhë* 'earth', Gr. $\chi\theta\acute{o}\nu$ 'earth'.

$\deltaαλε$ imperat., cf. Cymr. *dala* 'to hold', Hitt. *dala-*, *daliya-* 'to leave (in peace)'.

$με$ = Gr. $(\acute{\epsilon})\mu\acute{\epsilon}$, Alb. *më* 'me'.

4.2.1.3.4. The Inscription on a Vase from the Island of Samothrace

The following text is inscribed on a vase found in a sanctuary on the island of Samothrace:

AINTOAE = *Διῷ, τολε*.

A similar text was found on three other vessels from the same sanctuary (*AINTOAE* two times). *AIN* is also found on other vessels. Thrac.(?) *Διῷ* corresponds to OBG *dīni* 'day', and this name corresponds to Gr. *Ζεύς*, cf. the Macedonian toponym *Διῷ-δρυῖ* literally 'a forest of Zeus'. The text *Διῷ, τολε* is = 'Jupiter, tolle', cf. L. *tolle*, imperative from *tollo* (**tlnō*, OL. *tulo*) 'to raise, to take, to take away'. The meaning of the text on the object dedicated to the god is: 'Zeus, take (this gift)'.

4.2.2. Characteristic Features of the Thracian Language

In 1952 Dečev in his "Characteristics of the Thracian language" (= Dečev 1960) attempted to provide a completely new interpretation of the data on the Thracian comparative-historical phonology. His theory is the following: the comparative-historical phonology of Thracian is the same as the phonology of the "Pelasgian" (pre-Greek) language. The basic phonological features are the following: a change of *o* to *a*, a shift of the syllabic liquids and nasals into *ur, ul, un, um*, a consonant shift, a change of the so-called palatals into *s, z* or *p, d*, and delabialization of the labiovelars. Moreover, Dečev (1960: 198-200) thought that Thracian was the result of the crossing of Etruscan or an Etruscoid language with Iranian: "...the Indo-Europeans who mixed with the Etruscans or Etruscoids and bred the Thracian people belonged to an Iranian tribe...".

Undoubtedly, this theory has certain erroneous assumptions, as was pointed out by all the reviews of the book, especially in the detailed review by the Iranicist Abaev (1954). Dečev's basic mistake is that he does not consider Thracian to be a specific IE language — as all linguists do — but thinks it is an iranized non-IE language.

First of all there is no reason to consider Thracian to be the result of iranization because there is a considerable difference between the comparative-historical phonologies of the two languages: IE vowels *e* and *ē* were preserved in Thracian while they were shifted into *a, ā* in Iranian; IE vowel *ō* was preserved in Thracian while it was shifted into *ā* in Iranian; IE syllabic *r, l, n, m* appear in Thracian as *ur, ul, un, um* while we find *ər, a, am, an* in Iranian; *l* was preserved in Thracian while it was shifted into *r* in Iranian, etc.

Furthermore, there is no reason to assume that an Etruscan or Etruscoid population lived in the northern part of the Balkan Peninsula. Dečev's assumption is based on Kretschmer's (1940-43: 213-218) hypothesis of "an Indo-Germanic-Raeto-Tyrrhenian" language community. In his attempt to preserve his theory that the primitive home of the Indo-Europeans was in north Germany, and on the basis of the IE elements in Etruscan, Kretschmer assumed the existence of an Indo-Germanic-Raeto-Tyrrhenian language community which later had split up into Indo-European and "Raeto-Tyrrhenian". This hypothesis is erroneous (see section 3.3.2).

In spite of the deficiencies mentioned, Dečev's basic conception is correct. In Thracian toponymy there are obvious vestiges of a language in which there had been a consonant shift. This is clear from the investigations of the ancient names of the rivers in the eastern part of the Balkan Peninsula.

Ἰάθρος (Hdt.), *Ieterus* (Pliny), *Iatrus* (Iord.), now called *Jantra* (the upper part is called *Etār*), a tributary of the Danube in north Bulgaria, comes from **ētru-s* (or **ētro-s*) 'quick, violent', cf. OHG *ātar* 'acer, sagax, celer' from **ētro-*, Lett. *atrs* 'quick', Lith. (dial.) *ātrus* 'violent' from **ātru-s*. The open *ē* (= *ā*) from IE *ē* appeared as *a*, *ja*, *e* (Daco-Mysian influence).

Ἀράννης (Hdt.), a southern tributary of the Danube probably near the Jantra, cf. Skt. *ārdati* '(it) flows', Gr. *ἄρδω* 'to water', *ἄρδάνιον* 'vessel for water'. Cf. *Ἀράννης*, a river in Bithynia (Scylax), now called Kabakoz, *Ἀράννη* κοήνη ὑπὸ Ἀρμενίων (Hesych.).

Ἀρτισκός (Hdt.), *Ἀράννης*, *Ἀρτακος* (Theoph. contin.), a tributary of the *Ἐβρος* River in Thrace, later *Τόνζος*, cf. *Ἀράννης*, *Ἀρδησκος*, god of the river (Hesiod.). Cf. *Ἀρτακίη*, the original home of the Lestrigonians (*Odyssey* X, 108) near Kyzikos (Ar., Orph.), see *Ἀράννης*.

Ἀτλας (Hdt.), a tributary to the Danube in contemporary northeast Bulgaria between the Black Sea and the *Ἰάθρος* River (now called *Jantra*), from **Aντλας* < **Adu-l(y)ā* = G. *Attel*, a tributary of the Danube in Bavaria (**Adulyā*), and Lett. *Adula*, the name of a river. On the disappearance of the unstressed vowel cf. Thrac. *Σκαβαλαῖοι* > *Σκαβλαῖοι*, *Πάταρος* > *Patrus*, *Σπαράδοκος* > *Σπάρδοκος*.

Ἀχελῷος, *Ἀχελῶν*, *Ἀχελον* (Leo Grammaticus, Georgius Amartolus, Georgius Monachus; 927 A.D.), a small river near Anchialos (now called Pomorie) in northeast Thrace. The initial form probably was **Αχελ-ων*, a derivative from *αχελ-* < IE **ǵh^w-el-* 'water', cf. Gr. *ἀμπελ-ών* 'vineyard' from *ἀμπελος* 'vine', *κοπρ-ών* 'dung-heap' from *κόπρος* 'dung'. The name of this river is related to the river names Pel. *Ἀχελῷος*, Phryg. (Lyd.) *Ἀχέλης*, *Ἀιέλης*, L. *Aquilo*, Lith. *Akėlė*, cf. Phryg. *ακαλα* 'water'.

Τραῦος, a river which flows into *Βιστονίς* Lake in Thrace, recorded in Herodotus, corresponds to the name of the *Αράβος*, *Αράος* River, L. *Dravus*, *Draus*, now called *Drava*, a tributary of the Danube in Yugoslavia. This name is derived from **drowo-s* 'stream, river'.

Ἰούτος (Pliny), a tributary to the Danube in Bulgaria, now called *Vit*; *Οὔτωρ* (Proc.), *Uto* (IA; ND; TP; Iord.), a village or town at the mouth of the Vit. This name is derived from **udō(r)* 'water'; the Thracian form was **utō*, later **utu* (*ō* > *u*); on the lack of the final *r* cf. Mac. *ἀδῆ* = Gr. *αἰθήρ*, Skt. *pitā* = Gr. *πατήρ*, etc.

Similar peculiarities are recorded in personal names and toponyms: *Μη-τακος* = *Μη-δοκος*, *Σπαρ-τακος* = *Σπαρα-δοκος*. The etymology of these names is clear; the second element corresponds to Gr. *-δοκος* in personal names such as *Δαμό-δοκος*, *Θεό-δοκος*; Thrac. *σπαρ-* corresponds to the L. *sparus*, *sparum* 'short spear'; *Mā* is the name of the Thracian 'goddess-mother'.

Σεύθης is a Hellenized form from **ǵhew-tē(r)* (or *-tā-s*), cf. Skt. *hotā* = Av. *zaotar-* 'priest' from **ǵhew-tē(r)*.

Πέρινθος (Hdt., etc.), *Πείρινθος* (Mimnermus), a town on the coast of Propontis, cf. Skt. *pārvata-* 'mountain' from **peruṇ-to-*, Hitt. *peruna-* 'rock'.

This consonant shift is also confirmed by the etymology of some Thracian words:

βόλινθος 'bison, wild bull' = Thrac. **bul(l)-inth-* is derived from **b^hln-ent-(-ent > -inth-)*, cf. G. *Bulle* 'bull' from **b^hln-ēn*. This gloss is especially important because it shows that the change *l > ul (ol)* appears together with the consonant shift *t > th*.

βουνός 'κιδάρα' = Pol. *brzek*, Ukrainian *brjak* 'sound, din' from **b^hrṃko-s*, Gr. (Aeol.) *φούριγξ* 'κιδάρα' from **b^hrm-i-*. This gloss is important because the consonant shift *b^h > b* and *k > kh* is combined with the change *m > un*. *κελλη* 'spring' from **g^welnā* = G. *Quelle* 'spring', see section 4.1.

The IE diminutive suffix *-ent-* appears in Thracian in the form *-inth-(-enth-)* as in Pelasgian. This suffix corresponds to a suffix in Slavic, cf. OBG *kozilę* (gen. *kozilęte*) > Bulg. *kozle*, a diminutive from OBG *kozilŭ*, Bulg. *kozel* 'he-goat', Bulg. *vālcē* 'wolf-cub' from **w^lk^w-ent*. In Bulgarian and Serbocroatian, as well as in other Slavic languages, this suffix is used to form hypocoristic names (diminutives), cf. Bulg. *Petār* 'Πέτρος', dial. *Petré*, gen. (acc.) *Petréte*, *Kiro*, dial. *Kiré*, gen. (acc.) *Kiréte*, *Stoino*, dial. *Stoiné*, gen. (acc.) *Stoinéte*, Serb. *Mile*, gen. acc. *Mileta*, in which *-e* and *-et-* come from *-ent-* or *-nt-*. These forms have exact parallels in Thracian, for instance:

βόλινθος 'bison, wild bull' from **b^hln-ent-*, cf. Bulg. *biče* 'young bull' from **b^hlk-ent-*, diminutive from *bik* 'bull', see section 4.2.1.1.

ζηρ-ινθ = Bulg. *zveré* 'small beast' from **g^hwēr-ent-*, diminutive from **g^hwēr* 'beast'.

Βυζ-ης, *Βουζ-ης*, *Biz-ens* from **b^hug-ēnt-s* 'kid', cf. Av. *būza-* 'buck', Pers. *buz* 'goat, buck', Arm. *buz* 'lamb'. These Thracian names are diminutives (hypocoristics) from *Βυζος*, *Βύζας* from **b^hugo-* 'buck'.

Δορζ-ινθης, *Δορζ-ενθης* is a diminutive (hypocoristic) of *Δορζας*, *Δορσας*, *Dorson* from **d^hrs-*, cf. Gr. *Θαρσέας*, *Θράσων*, *Θρασύλος*, *Θρασύννης*.

These examples clearly show that in the eastern part of the Balkan Peninsula a population existed which spoke an Indo-European language whose characteristic feature was the consonant shift. In this respect this language is, on the one hand, similar to Armenian and, on the other, similar to Pelasgian. The ancestors of the Armenians came from the Balkan Peninsula.

But other toponyms from the Balkan Peninsula preserve the voiced and the unvoiced occlusive consonants without change. The following river names are examples of this:

**Ερίγων*, **Εριγών*, a left tributary of the **Αξιος* River in Macedonia (Strabo, Arr.), now called *Crna*. One may conclude from the contemporary name *Crna* 'black' that **Ερίγων* is derived from **(e)reg^w-* 'dark', cf. Gr. *ἔρεβος* 'darkness', Arm. *erek* 'night'. This toponym is Proto-Phrygian.

Αύγιος (Arr.), probably a tributary to the **Ιστρος* in the region of the Triballians. This name means literally 'marshy' and is related to lith. *Lūginas* a lake, *liūgas* 'marshy place, marsh', *lūgai* 'pool', *Lūgas* a lake; IE *g* is preserved. This hydronym is (Daco-)Mysian.

Σαλυ-υδη(σ)ός (Soph., Hdt., Xen., etc.), the name of a place on the coast, of a river, and of a town, now called Midia, on the Black Sea in eastern Thrace. This name comes from **salm-udes-(yo-)* 'salt water', cf. Gr. *ἅλμη* 'salt water, sea water' and *ἕδος* n. 'water': IE *d* is preserved. This toponym is (Daco-)Mysian.

**Όλγανος* (St. Byz.), a tributary to the **Αλιάκμων*, = Lett. *valgans* 'moist' from **wolg-*. This hydronym is Macedonian.

These peculiarities are also attested in some proper names and glosses, cf. for instance:

**Ανά-δραιμος* "*Ερνέα ὁδοί*", a city in southeastern Macedonia or southwestern Thrace, from *ανα-* 'nine' < **enwē* (*η* > *α*) and *-δραιμος* 'road' from **dym-yo-s*. This name is of Macedonian origin.

Αμα-δοκος, *Μα-δοκος*, cf. Gr. *-δοκος* from **doko-*.

**Εδεσ(σ)α*, a town in Macedonia, now called Bulg. *Voden* 'watery', from **wedes-* 'water'. This name is of Macedonian origin.

**Οδησσός* (Scymnus, Strabo, Pliny, etc.), **Οδο(σ)ος* (inscriptions), now called *Varna*, on the Black Sea in eastern Mysia, from **udes-yo-*; cf. Gr. *ἔδος* n. 'water'. This name is of (Daco-)Mysian origin.

Δω-δρόμη from **din* 'day, Zeus' and **drumā* (-o-s?), cf. Gr. *δρυμός* 'copse, thicket'. This toponym may be Macedonian or Proto-Phrygian.

The above leads to the following conclusion: in the eastern part of the Balkan Peninsula two Indo-European languages were stratified; one was obviously more ancient and had a consonant shift and the other preserved the voiced and voiceless stops without change.

In order to define these languages it is necessary to analyze some of the less known ancient Balkan languages (Daco-Mysian and Phrygian) and to establish their connections with Albanian and Armenian.

4.3. Dacian or Daco-Mysian

4.3.1. The Distribution of the Dacian and Thracian Toponyms

Before analyzing the Thracian and Dacian linguistic material one fact of paramount importance should be stressed with reference to the distribution of the toponyms. The most typical toponyms in Dacia, Moesia (= Mysia), and Thrace are the three types of compound names whose second members are the words *dava* (or *deva*) 'town', *para* 'river (?)', and *bria* 'town', for instance: *Acidava*, *Buridava*, *Sacidaba*; *Bessapara*, *Κεισπαρα*, *Tranupara*; *Μεσημβρία*, *Πολτυμβρία*, *Σηλυμβρία* (see sections 5.1-2).

There are 46 (or 51) toponyms with *dava* (or *deva*). Their distribution is as follows: 28 (or 29), i. e., more than half are found in Dacia, 9 (or 10) in Moesia Inferior and Scythia Minor, and 7 (or 8) in Dacia Mediterranea, i. e., in the central northern part of the Balkan Peninsula. There is only one in Thrace, *Pulpudeva*, however this town was named after the Macedonian king Philip II, in Greek *Φιλιππό-πολις* and in Thracian *Pulpu-deva* 'town of Philip'. This means that the only example in Thrace of this type of toponyms was introduced from the central part of the peninsula. Thus the toponyms with *dava* (*deva*) are typical of Dacia, rarely found in Moesia, and not found in Thrace (see Map 1).

There are 42 (or 51) toponyms with *para*. This type of toponyms is found only in Thrace (and in the neighboring regions); it is completely lacking north of the Danube, in Dacia.

There are 14 (or 17) toponyms with *bria*. This type is found only in Thrace. It is completely lacking north of the Danube, in Dacia.

The large number of these toponyms and their specific distribution allow the following conclusion to be made. **Thrace and Dacia were populated by ethnical communities which spoke two different Indo-European languages.** This conclusion is confirmed by the analysis of the Dacian (Daco-Mysian) and Thracian linguistic material.

The ancient authors did not have a definite idea about the linguistic situation in the area to the north of Greece. They often used the term "Thracian" for everything north of the Aegean region up to the Carpathian mountains. However, there are "localized" glosses: if a gloss is given as being "Dacian", this means that it is Dacian and not Thracian. But if a gloss is indicated as Bessian or Maidian — the Bessians and the Maidians lived in western Thrace — then we have to consider it to be Thracian.

The geographical distribution of the proper names (place names and personal names) also helps in distinguishing Dacian from Thracian.

4.3.2. The Dacian Vocabulary

Dacian is known to us through about 60 glosses (names of plant mentioned by Dioscorides and Pseudo-Apuleius), several hundreds of proper names, and a short inscription (See Detschew 1957; Georgiev 1964a, 1977: 194—9).

The Dacian vocabulary, which was established on the basis of the glosses and the most reliable interpretation of proper names, is as follows:

4.3.2.1. Glosses with a Certain or Highly Probable Etymology

adila 'φωτίζον, ἐρυθρόν' (Pseudo-*Ap.*) may be explained on the basis of its synonyms in Greek from **aydh-ilo-* 'burning > red', cf. Gr. *αἶθω* 'to light up, kindle', *αἰθίμης* 'smoky, sooty, burning, blazing', etc.; *ay* > *Dac. a* as in Albanian.

amalusta (v.l. *amolusta*, *amulusta*) 'camomile' (Pseudo-*Ap.*): due to the aromatic scent of camomile the Dacian word is correctly connected with Alb. *ambël*, *ëmbël* (f. with the article *e ambla*) 'tasty, sweet, pleasant'.

βουδάβλια 'βοῦ-γλωσσον': Pisani (1957) proved that the Dacian word *βου-δάβλια* (or *budama* instead of **budadla*; *M* instead of *AA* or *AA*) which in Greek is called *βοῦ-γλωσσον*, in Latin *lingua bubula*, in French *langue de boeuf*, comes from **gwoḍw-dygh(w-e)lā*, literally 'bull's tongue': *-δαβλια*, **-dadla* corresponds to Ol. *dingua*, Gotl. *tuggo*, E. *tongue*. Thus the IE labiovelar *gw* before an *ō* was labialized in Dacian during the 1st, 2nd or the 3rd century A.D.

δάκρυα 'a type of anemone' is also called *λύκον καρδία* 'wolf's heart' by Dioscorides. Thus *δάκρυα* comes from **dhāwkhino-*, an adjective from **dhāw-ko-s* 'wolf', cf. Phryg. *ḍáo-* 'wolf', OBG *daviti* 'to choke (as a wolf)' from **dhāw-*.

-dela, *-δηλα*, *-δὴ(λ)α*, *-zila*, *-tilia* 'herb' from **d'iel-*, **z'iel-* < IE **ghel(i)yo-m* (or *-ā*). The Dacian word *-dela* is the second member of several names of herbs: *dio-dela*, *zio-dela*, *δουώ-δηλα*, *τσὺ-δὴλα*, *πρά-δὴ(λ)α*, *usa-zila*, *usa-tilia* (Diosc., Pseudo-*Ap.*). On the basis of this the Dacian word is explained as 'herb' and is connected with the OBG *zel'je* 'cabbage', Russ. *zel'e* 'herb' from **gheliyo-m*, Phryg. *zēima* 'cabbage, grass'.

diesapter, see section 4.1.

δέεσμα, see section 4.1.

διέλλενα (Diosc.), *dielina* (Pseudo-*Ap.*) 'henbane'. Due to the pale color of its leaves this plant is called 'the pale one, the white one' in many languages, cf. Bulg. *bljan* 'hen-

bane' from **bhēl-no-s* and *bunika* 'henbane' from **bh_l-n-ikā*, which are related to Bulg. *bjal* 'white' < OBG *bēlū* from **bhēlo-s*, G. *Bilsenkraut*, Gall. *βελανούδια* 'henbane' from Celt. **belo-* 'bright, white' < IE **bhelo-*. On this basis Detschew (1957 : 546) correctly explains Dac. *δέλλεα*, *dielina* as being from **dhel-(e)ino-* (or *-ā*) = Arm. *detin* 'greyish, white, pale'.

δύν 'nettle': it was established long ago that *δύν* originally was the participle neuter **du-nt* 'burning', which corresponds to Skt. *dunoṭi* '(he) burns hot'. Nettle is called 'burning' in many languages, for instance in L. *urtica* 'nettle' from *ūrō* 'burn'.

ζήρα 'hemlock' (Diosc.), a poisonous plant (Gr. *ἀπολόνοσα*, *δοίλα*, *παράλυσος*, *οὐλόμενον* or *δητοῖσα*), comes from **gyēnā* and corresponds exactly to Skt. *jyānaya-* f., Av. *zyānaya-*, *zyānā-* f. (Pers. *zījan*) 'harm'.

ζουόβουλα 'Bryonia alba': on the basis of the Greek name *μήλ-ωθρον*, a derivative from *μήλον* 'apple', and Lith. *šūn-obuolas*, literally 'dog apple', from **kun-ābōlo-s*, the Dacian word was explained by Tomaschek and Jokl as being from **kun-ābōlo-* (or *-ā*). The Dacian (closcd) *ō* (from IE *ā*) is written in Gr. as *ov*. IE *ō* > Dac. *oi* or *ō* (= *oi*) was the earlier stage of Alb. *e* from *ō*. Considering that the lists of synonyms given by Dioscorides could be from the 2nd or 3rd century A. D. one may conclude that the intermediate stage *oi*, respectively *ō*, had already been attained during the 3rd century A. D.

ζουάδιμα 'ποταμο-γείτων' (a kind of reed) comes, like the Greek word *ποταμο-γείτων*, literally 'water neighbor, i. e., (what grows) along the river', from IE **akwā-domi* (or **domo-*, respectively **dhāmī*), literally 'whose habitat is the water'. The first member of this compound word is related to L. *aqua* 'water'. The second element corresponds to Gr. *δόμος* or *δῶμα* 'house' or the Skt. *dhāman-* n. 'dwelling-place', Gr. *θαμῶς* *οἶκλα*, *σπόρος*, *φινεῖα* (Hesych.) from **dhām-yo-s*. As to the shift *o* (from *ā*) > *oa* because of *a* (or *e*) in the following syllable cf. Rum. *roată* 'wheel' from L. *rota(m)* (Dacian substratum). But it could also be assumed that *ko* is = *k_w*, a labiovelar preserved before an *ā* during the 1st century A. D.

ζουλάτα (v. l. *ζουλάτα*) 'couch grass' (Diosc.), as was established by Detschew (1957 : 552), corresponds to Czech *koťata* 'kitten' (pl. from *koťe*) which refers to the cylindrical flowers of the willow, the birch, and the so-called cereals, which belong to the same family as couch grass. Czech *koťe*, pl. *koťata* 'kittens on the trees' from Slavic **koťe*, gen. **koťete* is the diminutive from *koťū* 'cat' = L. *cattus*, *catta* 'wild cat'. Dac. *ζουλάτα* probably was derived from an older **kāte(n)ť-ā* (att > Dac. *āt* ?) : *e* > *ia* before *a* in the following syllable, cf. L. *petra(m)* > Rum. *piatră* (Dacian substratum).

ζ(ο)υριοννηκούμ 'φωρίλεον, ἐρυθρόν' (Diosc.) may be explained on the basis of the Greek names mentioned by Dioscorides (2, 167) : *καπλόν οπιθαμαῖον, ὑποπόρφυρον, ὑπεροειδῆ*. Dac. *ζ(ο)υριοννηκούμ* 'the reddish (plant)' comes from **k_rwen-iko-* and corresponds to Bulg. *červenikav* 'reddish', a derivative from *červen* 'red' from **k_rwen-eno-*.

μαρτία (v. l. *μαντοία*, Diosc.), *mantua* (Pseudo-*Ap.*) 'black-berry': Alb. *man*, dial. *mand*, *mën* 'mulberry'.

μήζηλα 'thyme'; Dioscorides remarks about this : *ἔστι δὲ καὶ οὐρητικόν* (diuretical). On this basis Tomaschek derives the word from **meygh-* 'to urinate'. Dac. *μήζηλα* then is derived from **m(e)ighē-[ghe]l(i)yo-m* (with haplology) or from **m(e)igh-ilo-*, cf. Arm. *mizem*, Serbocroat. *mizam* 'to urinate', Av. *maēzaiti*, Skt. *mēhati* '(he) urinates', Gr. *δ-μείχειν* inf. 'to urinate'.

οἶβα 'elder, hollow-tree' (Diosc.); Tomaschek points out that "the branches are full of pith and towards the tips they are empty"; from this comes E. *hollow-tree*, OHG *holuntar*, Lith. *kiāur-medis* and *šeivā-medis* 'Spülchenbaum' from *šeivā* 'pipe, tubule'. Thus Dac. *οἶβα* 'elder' = Lith. *šeivā* 'pipe, tubule' comes from **kēy_wā*.

Dac. *sipoax*, v. l. *sipotax* (also *sinpeax*, *scimpeax*) 'plantain' may be explained on the basis of its Greek and Latin names which are mentioned by Pseudo-Apuleius. The Greek word for plantain is *ἐπτά-πλευρον* '(having) seven ribs': the characteristic feature of the plantain is its wide flat leaves with seven ribs. The variants *sipoax* and *sipotax* help to restore the Dacian form **siptoáx*: it is a derivative from **sipta* < IE **septm̥* 'seven' plus the suffix *-āk(o)s*. This same suffix frequently appears in Slavic, cf. Bulg. *sedm-ák* 'a seven-year-old animal; a seven-month baby', Russ. *sem-ák* 'week'. The original herbarium by Pseudo-Apuleius is from the end of the 3rd century A. D. but the addenda are probably from a botanical dictionary from the 6th century.

Dac. *σκιάγη* 'thistle' = **skiarā* (with a Hellenized *η*) from **skerā* is related to Alb. *shqer* 'to tear', OHG *sceran* 'to shave'. The etymology is certain: the thistle with its thorns has since ancient times been used for carding wool, *e > ia* before *a* or *e* in the following syllable as in Rumanian (Dacian substratum).

4.3.2.2. Dacian Words Restored by Interpreting Proper Names

αῖζ- > *az-* 'she-goat' (toponym *Αἰζαίς*, *Azizis*) = Arm. *aic*, Gr. *αῖζ* 'she-goat'.

ἄξ(ε)ι- 'dark, black' (hydronyms **Αξ(ε)μος*, **Αξι-οπα*) from **η-ksey-*: Av. *axšaena-* 'dark, black' from **η-ksey-no-s*, see section 4.1.

-απι 'water, river' (toponym *Ζάλδ-απα*), cf. OPruss. *ape* 'river'.

bersa- 'birch' (toponym *Bersovia*), cf. OBG *brěza* 'birch' from **bhergā*.

-βιστας 'πιστός' (personal names *Βυγε-βίστας*, *Βοιγε-βιστας*, *Ανλου-βίστας*, *Αντί-βιστας*) = Gr. *πιστός* from **bhidh-to-s* (and Thracian?).

βυρ-, βοιρ-, bur- 'man' (personal names *Βυγε-βιστας*, *Βοιγε-βίστας*, *Bur-vista*, cf. Gr. *Πιστο-ανδρος*), cf. Alb. *burrë* 'man' (and Thrac.).

δᾶσ(α)- 'wolf' (proper names *Δᾶοι*, *Δάοι*, *Dāvos*, *Davus*, *Daus*, *Δαοντο-δαρα*) = Phryg *δάος* 'wolf'.

**druveta* 'tree' (toponym *Δροβητίς*, *Drobetae*) = Rum. (Dac.) *druete* 'tree', Alb. *drutë* pl. 'trees'.

εσπ-, ασπ- 'horse' (name of the god *Βετ-ασπιος*, *Ουετ-εσπιος*, *Ουτ-ασπιος*), cf. Thrac. *εσβ-* from **ekwo-*.

germi- > *ζεγμι-* 'hot' from IE **gʷherm(i)-* (place name *Germisera*, *Γεγυλζερα*, *Ζεγυλί-ζεργα*), see section 4.1.

καρπα- 'rock' (name of a mountain *Καρπάτης*) = Alb. *karpë* 'rock'.

κρίσ(α)-, gris- 'black' in the name of the *Κρίσος* = *Grisia* River, now Rum. *Criș-ul*, Hung. *Körös*, Rum. *Crișul Negru*, Hung. *Fekete-körös* 'Black Crish', cf. Bulg. *čer* 'black' from **křhso-s*.

mal- 'bank, slope, mound, mountain' (toponym *Dacia Maluensis* = *Dacia Ripensis*), cf. Alb. *mal* 'mountain' from **mol-no-s*, Rum. (Dac.) *mal* 'bank', Lett. *nāla* 'bank, verge'.

per 'boy, son' from **pwerō-* = L. *puer* 'boy, son'.

sara 'stream, brook, river' (toponyms *Αεσ-σαγα*, *Deu-sara*, *Sapri-sara*) from **sorā* (**soro-s*) and *-ζεργα* 'stream, brook, river' (toponym *Γεγυλί-ζεργα*) from **serā* (**sero-*), cf. Skt. *sarā-* 'liquid'.

σαλι- (hydronyms and toponyms *Salmor-ude*, *Σαλι-υδησοός*) = Gr. *αἶμη* 'salt water', *salmor-* = *ἀλμυρός* 'salty' (and Thrac.?).

ude 'water' from IE **udō(r)* (toponym *Salmor-ude*), see section 4.1.

upa 'river' (toponym **Αξι-οπα*, **Αξι-ούπολις* 'black water') = Lith. *ūpe* 'river, stream', diminutive *upelis* 'rivulet'.

ζαλδ(α)- 'yellow, golden' (place name *Ζάλδ-απα*), see section 4.1.

The most typical features of the historical phonology of Dacian (Daco-Mysian), as determined by the most certain etymologies of the glosses and of proper names, are given in Table 7.

Table 7
Typical Features of Dacian (Daco-Mysian)

Indo-European	Daco-Mysian
<i>e</i> (under stress)	<i>ie</i>
<i>o</i>	<i>a</i>
<i>ā</i>	<i>ǎ > o</i>
<i>ē</i>	<i>ē > \ddot{a} > \bar{a} > o</i>
<i>ō</i>	<i>ō > oi (> ō) > e</i>
<i>ū</i>	<i>ū > ui > ü</i>
<i>aw</i>	<i>a</i>
<i>ey</i>	<i>e (=ē)</i>
<i>ew</i>	<i>e</i>
<i>ȳ</i> (under stress)	<i>a</i>
<i>ŗ</i> (under stress)	<i>ri, ir</i>
T(enues)	T
M(ediae)	M
MA (aspiratae)	M
<i>k'</i>	<i>s, (ß)</i>
<i>g', g'^{rh}</i>	<i>z, (đ), d</i>
<i>tt, (dt, d^{ht})</i>	<i>s</i>
<i>s-, -s-</i>	<i>s</i>
<i>sw-</i>	<i>w-</i>

4.3.2.3. The Dacian Inscription

The following inscription was written on an earthenware vessel which was found near Dialul Grîdiştei in the Orîştiei Mountains in Dacia:

Decebalus per Scorilo 'Decebal, son of Scoril'.

The word *per* 'boy, son' is derived from **pwer(o)-* or **p(u)wēr(o)-*, cf. L. *puer* 'child, boy, son'. *Scorilo* gen. sing. (or abl. of origin) with the ending *-o*, cf. Lith. *-o*, OBG *-a* gen. from IE (abl.) *-ōd*.

4.3.2.4. The Geto-Mysian (?) Inscription

In 1965 an inscription was found in southeastern Mysia on the border with Thrace (east Bulgaria); it was written on a large tombstone (probably from the 6th century B. C.) and it reads as follows (see Georgiev 1966b; 1977: 119-134).

¹*ebar. zesašn en etesa igeġ. a. 2nblabahegn 3nuasnletednuedneindakatr. ś.*

This text may be interpreted and translated in the following way:

¹*Ebar Zes(a) ašn en etesa igeġ. a. 2N blabahe gn! 3N ua(s?) sn letedn ued(n), ne in dakatr ś!*

¹*Ebar Zesae ego LVIII annos vixi hīc. 2Ne mulces eum (sive hunc)! 3Ne laedas hunc (sive eum) mortuum ipsum, ne sibi (= tibi) faciatu hoc (sive id)!*

ašn = asn (Ezerovo), cf. Av. *azəm*, Skt. *ahām*, OBG *(j)azū* 'I'.

etesa = Hom. *ἔτσα*, Att. *ἐτη* from IE **wetes-a* nom. acc. pl. from IE **wetos* n. 'year'
igek from IE **en-gwyē-k-a* (or *-ni*), cf. Gr. *ἐζήκα* 1st pers. sing. perfect from IE
**gwyē-* 'to live'.

n = OBG *ne*, Lith. *ne*, Goth. *ni* 'ne'.

blabahe 2nd pers. sing. imperat., cf. Gr. *βλάβη* 'harm', with assimilation from **βλαπη*,
 Skt. *mṛcayati* 'harms' from IE **mḷkw-*.

gn acc., cf. Alb. *ky* 'this, he'.

ua, cf. Hitt. *uwai* n. 'misfortune, sorrow, pain'.

sn acc., cf. OBG *sī* = Lith. *šis* 'this', cf. *š*.

let-edn, cf. L. *lētum* 'death'.

ued, cf. Alb. *vet* 'one's own', Daco-Mys. (or Thrac.) *ουετ-* 'αὐτός'.

in = ? *in* 'ei'.

dakatr from IE **dhāk-ā-tor* 3rd pers. sing. subj. pass., cf. Phryg. (*ad*)*daketor*, L.
facitr, subjunctive *faciātur* from *facio* 'to make'.

This inscription seems to be in (Geto-)Mysian (or Thracian?).

4.3.2.5. Mysian

In antiquity two regions were called *Mysia*: one (later *Moesia* > L. *Moesia* with *oi* = *i*) was within the boundaries of contemporary north Bulgaria (but excluding Dobrudja) and of northeast Yugoslavia; the other was the northwest part of Asia Minor between Phrygia and Lydia. According to ancient data, the population of Mysia in Asia Minor had come from the Balkan Peninsula. In Asia Minor the Mysian language was strongly influenced by Lydian and Phrygian and became a mixed Lydo-Phrygian dialect. Nothing is known about the language of the Balkan Moesians. All that is left of the Mysian language in Asia Minor is several glosses and an extremely damaged inscription. The Mysian glosses are as follows:

μενδοροντά 'λεμόνιον', 'hellebore' (Diosc.; in the codices there is alternation between *Mvool* and *Máqooi*) from **mēmsr-āto-* (or *-ā*), cf. Serbocroat. *mēzdra* 'skin, membrane' (the leaves of the plant have thin membranes), L. *membrāna*.

μυσός: *δῆβη*, 'beech': Mysian or Lydian (Strabo). Its origin is clear: *μυσός* from **bhūg'o-s*, cf. OBG *būzū*, Kurd. *būz* 'type of elm': change *b* > *m*.

συκαλόβον (acc.) 'shepherd's crook' (Hesych.) < **sū-gḷbho-* 'Sau-Kolben', a compound from **sū-s* 'swine' and **gḷbho-* = Old Norse *klubba* 'Keule', G. *Kolben*, cf. Haas 1960a: 42, 62. This word seems to be of Phrygian origin: *g* > *k*, *ḷ* > *al*.

Φανάκης 'Bacchus' (Auson.) probably = *Φανακ-* = *ἄναξ* or = Gr. *παν-ακής* 'All-heiler' (Haas 1960a: 38, 63).

These glosses do not give any essential information about the linguistic position of Mysian but on the basis of *μυσός* one may assume that *g'* shifted into a sibilant.

There is also a short inscription which was found in Uyucik, a place between Mysia and Phrygia, which was correctly considered to be Mysian by its publishers. The inscription has seven lines and may be dated with a certain amount of probability between the 4th and 3rd centuries B. C. It is quite damaged and hardly legible; in spite of this there are two words which make it possible to determine the position of the Mysian language. They are the words *brateraiš patrizi*, which can be interpreted as **b^hrātē(r)* 'brother' and **patē(r)* 'father', or their derivatives. The first word, *brateraiš*, may be dat.-instr. pl.; Mys. *bratera-* corresponds to OBG *bratrū* 'brother' from

**b^hrātro-* (-o-stem). The second word, *patrizi*, corresponds to Gr. *πατρίαι* dat. pl. and to Skt. *pitṛṣu* loc. pl. from Gr. *πατήρ*, Skt. *pitā*, and contains *ri* from *r*, which is typical of Dacian and Albanian. The shift of the intervocalic *s* into *z* is also found in Dacian and Thracian. However, this interpretation cannot be considered as certain since *brateraiṣ patrizi* can be = Gr. **φρατεραῖς πατρίαι* dat. pl. of **φρατερα* = Ion. *φρήτην*, Att. *φρατρία* 'brotherhood' and *πατρίς*.

The analysis of the Rumanian, Bulgarian, Serbian, and Greek vocabulary makes it possible to reconstruct some of the words which belong to the Dacian and Thracian substrata. The following example makes it clear that some Dacian words were preserved in Rumanian.

In the time of Marcus Aurelius a part of Dacia, the Roman province, was called *Dacia Malvensis* or *Dacia Ripensis*: *ripensis* 'coastal' is derived from *ripa* 'bank, coast' and is the Latin translation of the Dacian word *mal-* 'bank, coast' in the latinized name *Malvensis*. The Dacian word is preserved in the Rumanian word *mal* 'bank, coast' and in the Albanian word *mal* 'mountain', which correspond to the Lettish word *mala* 'bank, boundary'. In Rumanian there are about one hundred words which have correspondences in Albanian and can be considered to be of Dacian origin, as for instance Rum. *bucura* 'to make happy, to entertain, to give pleasure' and Alb. *bukur* 'pretty, excellent, pleasant'. Furthermore, there are many words in Rumanian which cannot be explained either from Latin or as borrowings from other neighboring languages: they are of Dacian origin.

On the whole, **Rumanian** is of Romance origin, as are Italian, French, etc., but it has preserved as a substratum many elements of an obsolete IE language, namely Dacian (or Daco-Mysian), and this has definite importance for Indo-European linguistics.

4.3.3. Characteristic Features of Dacian as Compared to Thracian

It has already been mentioned that the Dacian gloss *διέσμευ* 'common mullein', G. '*Himmel-brand*', comes from IE **dī(y)es-ewsm̥y*. This gloss proves that in Dacian IE *d* was preserved, *ew* shifted into *e*, and *η* into *a*: these changes are typical of the comparative-historical phonology of Albanian. Furthermore, in the name *Δᾱκοί*, which is derived from **d^hāw-ko-* 'wolf' (see above), there is a shift *aw* > *a* which is also typical of Albanian.

As was already mentioned, the place name *Ἀξί-οπα*, meaning 'black water', comes from **η-ks(e)y-upā*. The second member of the compound word *Ἀξί-οπα* or *Ἀξι-ούπολις* (Hellenized after *πόλις* 'town'), corresponds to Lith. *upė* 'river', *upėlis* diminutive, while the first element, *Ἀξ(ε)ι-* 'black', corresponds to the ancient name of the Black Sea, *Ἀξεινος πόριος* (later changed to *Εὔξεινος* due to euphemism), a Dacian or Iranian name related to Av. *axšaēna-* 'dark, black' from **η-ksey-no-s*. From this etymology one can draw the conclusion that in Dacian (as in Greek) the IE syllabic *η* shifted into *a*.

It was established long ago that the name of the *Καρπάτιος* Mountains comes from *(s)*korpātā* 'rocky' and corresponds to Albanian *karpë* 'rock' from *(s)*korpā*.

On the basis of the contemporary names Rum. *Crișul Negru* and Hung. *Fekete-körös* 'Black Crish' the name of the Dacian *Κρίσος* River is derived from **k^(w)r(h)so-s* 'black', Skt. *kṛṣṇa-h* 'black' from *k^(w)r(h)s-no-s*, Lith. *kėšas* 'with black spots'.

The Dacian gloss *βονδάθλα* 'βούγλωσσον, lingua bubula', which is recorded in Dioscorides (1st, 2nd or 3rd century A. D.), is correctly explained on the basis of the Greek and Latin names as coming from IE **g^wōw-d^hg^h(w-e)lā*, a derivative from **g^wōw-s* 'bull, ox, cow' and **d^hg^hu/ṵā* 'tongue' (see section 4.1).

The place name *Germisara*, *Γερμίζερα*, *Ζερμίζερα* is correctly interpreted as 'hot stream (or water)' from IE **g^wherm(i)-* 'hot'.

These examples are sufficient to determine the basic features of the comparative-historical phonology of Dacian.

IE *o* shifted into *a*: *Καοπάτης*.

IE *ew* shifted into *e*: *διέσεμα*.

IE *u* shifted into *a*: *Ἀξιοπα*, *βονδάθλα*, *διέσεμα*.

IE *ṛ* shifted into *ri*: *Κρίσος*.

IE voiced (mediae) and voiceless (tenues) stops are preserved: *διέσεμα*, *δύν*, *Καοπάτης*, *Κρίσος*.

IE labiovelars *k^w*, etc., were delabialized before *ǵ*, *ǵ̃*, and after the 1st century A. D. shifted into affricates or sibilants, but before *ǵ̃*, *ǵ̃̃* they were preserved and towards the 2nd century A. D. were labialized (in some dialects): *Γερμίζερα* > *Ζερμίζερα* but *βονδάθλα*.

The intervocalic and initial antevocalic IE sibilant is preserved: *διέσεμα*, *Κρίσος*, *Μαρίσια* from **morisyo-*, *Salmor-u-de*.

Let us now compare the Dacian comparative-historical phonology with that of Thracian.

The Maidian (=Thracian *stricto sensu*) gloss *βόλωνθος* 'wild bull, bison' corresponds to E. *bull* from **b^hlⁿēn*. Thus the Thracian word is derived from **b^hlⁿ-ent-* with a consonant shift and with *ol* from *l*.

The same phonetic peculiarities are met in the Thracian gloss *βρονχός* 'wind', which comes from **b^hr^hmko-s* and corresponds to Pol. *brzęk* 'din, sound' from **b^hr^hmko-*, Gr. (Aeol.) *φόρυγξ* 'lyre' from **b^hṛmi-*.

The difference between Thracian and Dacian is obvious from the following example. The plant which in Greek is called *βουωνία λευκή* or *μήλωνθρον* (a derivative from *μήλον* 'apple') is called *κυνόβουλα* in Dacian. The Lithuanian name for this plant is *šunobuolas*, which literally means 'dog apple' and comes from **kun-ābōlo-s*. Tomaschek and Jokl proved that the Dacian word *κυν-ούβουλα* comes from **kun-ābōlo-* (with *ā* > *ō* > *ov*, *ō* > *oⁱ* or *ō = oi*) and corresponds precisely to the Lithuanian word. The same plant is called in Bessian — i. e., in Thracian *stricto sensu* — *din-upula*, which comes from **kun-ābōlo-* (with *k' > p*, *ō > u*, *b > p*) and exactly corresponds to the Dacian word. The difference between *b* and *p* shows that in Dacian the voiced stops were preserved while in Thracian there was a consonant shift (*M > T*).

The same difference is found in the name of the Thracian *Utus* River, which comes from IE **udō(r)* 'water' and in the name of the Dacian lake *Salmor-u-de*, the second component of which also comes from **udō(r)*: the IE voiced stop was preserved in Dacian while in Thracian it was shifted into *t* (consonant shift).

The basic features of the comparative-historical phonology of Thracian are the following:

The short IE vowel *o* shifted into *a*: *Panisos*, *Pan(n)isis* from **poni-syo-*.

The IE diphthong *ew* was preserved: *Σεύθης*.

IE nasal sonants *ŋ* (*ṃ*) shifted into *un*: *βουνχός*.

IE syllabic liquids *l*, *r* shifted into *ol* (*ul*), *or*, *ur*: *βόλυνθος*.

IE voiced (mediae) stops shifted into voiceless (tenues): *dinupula*, *Utus*.

IE voiceless (tenues) stops shifted into voiceless aspirates (tenues aspiratae): *βόλυνθος*, *βουνχός*.

The IE intervocalic sibilant *s* was preserved: *Panisos*, *Pan(n)isis*.

The IE cluster *sr* shifted into *str*: *Στρουιόν* from **srum-ōn*.

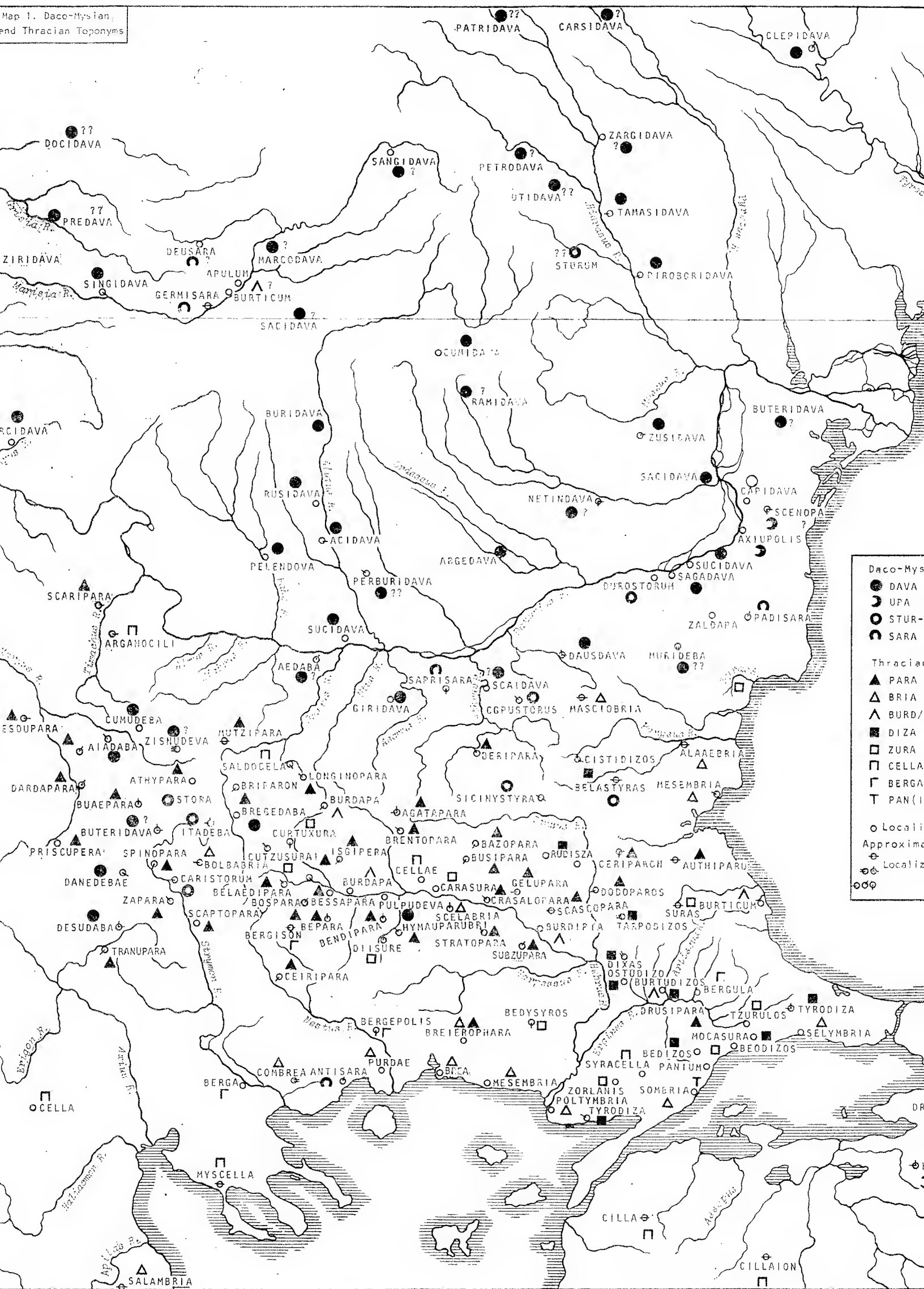
The differences between Thracian and Daco-Mysian are as follows: in Thracian there was a consonant shift (*T > TA*, *M > T*), while in Daco-Mysian the voiced and voiceless stops were preserved; in Thracian IE syllabic *r*, *l*, *ŋ*, *ṃ* shifted into *ur*, *ul*, *un*, *um*, while in Daco-Mysian they resulted in *ri* (*ir*) and *a*.

The toponyms and hydronyms in which there was a consonant shift are attested in the eastern part of the Balkan Peninsula, approximately in the region between the Danube, the Black Sea, the Aegean, and the Strymon and Timok Rivers, i. e., in the territory of contemporary Bulgaria and in Turkish and Greek Thrace. Toponyms with a consonant shift are not found in Dacia.

The following fact is a glaring example of this phenomenon. The Vedeia River (in Rumania) flows into the Danube not far from the Vit and Jantra Rivers, which are right tributaries to the Danube. The names *Vit* and *Jantra* originate from Thrac. *Utus* and *Ἰαντρός*, both of which have a consonant shift: these names come from **udō(r)* 'water' and **ētru-s* 'quick'. The name of the Vedeia River is derived from **wedō(r)* 'water': in this word IE *d* is preserved unchanged, cf. Phryg. (?) *βεδν* 'water', Arm. *get* 'river' from **wed-*.

The name *Θραῖκες* (*Iliad*, etc.) comes from an older form **TqaFh-u-es*. It was borrowed by the Greeks before the shift of intervocalic *s* into *h*: **TqaFh-u-es* is a derivative from the name of the Thracian tribe *Tqawool* which inhabited the southwestern part of the Rhodope Mountains (Hdt.). The names *Θραῖκες*, *Θρακία* are connected with the region to the south of the Danube and especially to the region south of the Haemus (Balkan) Mountains, while the names *Δῶκοι*, *Δακία* are connected with the territory of contemporary Rumania, and *Mvsool*, *Mvota* are connected with the territory of contemporary north (northwest) Bulgaria and northeast Yugoslavia.

Therefore, the term **Thracian** must be connected with the specific features of the most ancient toponyms to the south of the Danube. Dečev correctly insisted that the consonant shift and the change of the IE syllabic liquids and nasals into *ur*, *ul*, *un*, *um* are characteristic peculiarities of the comparative-historical phonology of Thracian. In that case Daco-Mysian is a **different** language from Thracian: the specific features of Daco-Mysian are the preservation of the voiced and voiceless stops and the shift of the syllabic liquids and nasals into *ri*, *ir* and *a*. This means that Daco-Mysian was closely related to or was the direct ancestor of Albanian. The above is confirmed by a series of common elements in Albanian and Rumanian: Rumanian has a considerable Dacian substratum.



On the basis of the analysis of various names from northern Bulgaria, as for instance *ἸΑθους—Jantra*, *Utus—Vit*, in which a consonant shift has been established, one must conclude that north Bulgaria (or part of it) once was populated by Thracian tribes but that this region was later occupied by (Daco-)Mysians.

Therefore, the general course of the history of the Thracians and the Daco-Mysians is as follows: the Thracian tribes were the most ancient population in the eastern part of the Balkan Peninsula (south of the Danube). During the 3rd or 2nd millennium B. C. Daco-Mysian tribes which populated the territories of Dacia and northeastern Yugoslavia gradually started to move to the southeast and mixed with the Thracian tribes. Thus the Daco-Mysian language had a certain influence on Thracian. This explains the Daco-Mysian borrowings in Thracian such as *δέβα* = *deva* 'town' and the proper names as *Pulpudeva*, *Ὀδησός*, *Σαλμυδησός*, etc.

4.4. Phrygian

4.4.1. The Phrygian Vocabulary

Phrygian is slightly better known than Thracian and Dacian since not only twenty glosses and a hundred personal names but also about 230 short inscriptions are available. About 130 of the Phrygian inscriptions are from the 8th-3rd centuries B. C. (Old Phrygian) and about 100 date from the 1st to the 4th century A. D. (late Phrygian).

The Phrygian glosses and in general the data from the inscriptions and onomastics whose interpretations are convincing are as follows (see Jokl 1927; Haas 1939a; 1939b; 1957; 1960a; 1960b; 1961; 1966; 1970; J. Friedrich 1932: 123-140; 1941; Gusmani 1959; Young 1969):

4.4.1.1. Glosses Whose Interpretations Are Certain or Highly Probable

ἄζην, acc. *ἄζένα* 'παῶνον, beard'; (Hesych.), cf. Skt. *hanu-h*, Av. *zānu-*, Gr. *γένει* 'beard' from PIE **gen-*.

βαί(λ)ην, *-ῆρος* 'king' (Aesch., Soph., Hesych.) = ? **Faiην* from **wal-ēn(t-s)*, cf. Toch. B *wa(a)lo*, A *wāl*, *wālā-*, AB *lānt* acc. 'king', L. *valens*, *-ntis* 'powerful, strong'.

βάμβαλον 'ἱμᾶτιον, clothing'; *αἰδοῖον* (Hesych.; v. l. *βάβαλον*), cf. Gr. *φαλλός* 'penis' from **bhūno-s*.

βέδν 'water' (Clem. Al.), probably instead of **vetu* from **wedō(r)*.

βέκος 'bread' (Hdt., Hipp.), cf. Gr. *φάγω* 'to roast, toast', E. *to bake*.

βερεκύνδα 'ῥόμβος, whipping top' (Hesych.), *βουκτοματα* 'ῥοχνητός φουρνακί' (Hesych.), cf. Czech *brk*.

γέλαρος or **γελαρος* 'sister-in-law' (Hesych.), cf. also *γάλλαρος*, *Φρυγιάζον ὄνομα* (Hesych.), cf. Att. *γάλος* 'sister-in-law'.

γλουρός 'χορτός', *γλούρεα* 'χρύσα' (Hesych.), cf. Gr. *χλωρός* 'green, yellow'.

δάος 'wolf' (Hesych.), cf. OBG *daviti* 'to choke, to stifle'.

δομνος '(religious) municipality (*σύνδοχος, σύγκλητος, συμβέσις*)', cf. Gr. *θωμός* 'pile' Goth. *dōms* 'opinion, evaluation'.

εζίς (ξ instead of ζ?) 'hedgehog', cf. Lith. *ežys*, Lett. *ezis* 'hedgehog'.

ζέλεια 'greenery, vegetable (λάχανα)' (Hesych.), cf. Bulg. *zelka* 'cabbage', Russ. *zelen* 'vegetables'.

ζέινα 'πύλη, door' (Phot.), cf. Anglo-Saxon *geat*, E. *gate*.

ζεῦμαν τὴν πηγὴν. Φορύγες (Hesych.), cf. Gr. *χεῦμα* 'that which is poured, stream, flow'.

καν- (= *k'an-) 'dog' (Plato), cf. Gr. *κύων*, L. *canis* 'dog', Maeonian (Phryg.-Lyd.) *Καν-δαύλας* (Hipp.).

κίκλη 'cart' (constellation, Hesych.), cf. Gr. *κύκλος* 'wheel'.

κίμερος 'ροῦς' (Hesych.), cf. Skt. *cāyati* '(he) watches, takes care'.

πικέριον 'βούτυρον' (Erotianus) instead of *πιφεριον (?), cf. Gr. *πίριον* 'at' from *πιφερία.

πυρ- (*pcur) 'fire' (Plato), cf. Gr. *πῦρ* 'fire'.

τυρ(ρ) 'ἕδωρ, water', cf. Gr. *ἕδωρ* 'water'.

4.4.1.2. Words from the Inscriptions

αββεβει '(he) offers (er fügt zu)', αββερεται, αββερετορ, αββιετορ, cf. L. *ad-fert*, *ad-fertur*.

αδ- '(near), at, by', cf. L. *ad* 'to, near, by'.

αδ-δακετ '(he) causes (προσποιεῖ)', αδδακεται, αδδακετορ, cf. L. *ad-ficit*, *ad-ficitur*, see *δακετ*.

αδειτον 'he (must) go to (er soll hingehen)' or 'he (must) be with', cf. L. *ad-ito* (or *ad-esto*), see *ειτον*.

αι (τι κος) 'if (someone)', cf. Gr. *εἰ*, dial. *αἰ*.

ακαλα, ακκαλος 'water', cf. Ἀχέλης, a river near the town of Smyrna, cf. Lith. *Akėlė*, a lake name, L. *aqua* 'water'.

ακκε = L. *atque*.

βεκος 'bread', see above.

βεροισι 'φείγοι': -ο- from -gy-.

βρατερε dat. sing., cf. L. *frāter*.

γεγραμμενος 'stigmatized', cf. Gr. *χαράττω*.

δαδιτι dat. 'coniugi' = Gr. *τηθίδι* dat. from *τηθίς* 'aunt'.

δακαρ(εν) 'fecere' < *dheker, cf. L. *fēcēre* perf. 3rd pers. pl.

δακετ, see *αδ-δακετ*.

δεος, δεως, διωz dat. pl., cf. Gr. *θεός* or *Δι(F)ός*.

δουμος 'σύντροφος', see above.

εδας 'fecit', cf. Gr. *τίθημι* 'to put'.

ειροι, ιροι 'children' from *er-yo-: Thess. *ἐρῆας* 'τέκνα'.

ειτον imperat. 'let him go' (or 'let it be'), see *αδ-ειτον*.

εοτας '(he) put', cf. Gr. *ἵστημι* 'I put'.

ετ, ετι 'besides, moreover, and' = Gr. *ἐτι*.

Εγνακει dat. sing. = Gr. *ἄνακι* from *ἄναξ* 'king'.

Εγν αFην dat. sing. 'to oneself (ihm selbst)'.

ιος 'ός, who', ιαν 'quam', ιοσκε = Gr. *ἴοτε*, Skt. *yaśca*.

κακο(v)ν, κακιν, κακεν 'κακόν, harm'.

κε = Gr. *τε* 'and'.

κνονμαν (dat. sing. *κνονμει*) = Gr. *κένωμα*.

κος 'someone' = Skt. *kaḥ* 'who'.

μανκαι dat. sing. 'grave'.

ματαρ 'mother', ματεραν acc. sing., ματερεJ dat. sing.

με = Gr. *μή*.

ν-ουμενος 'καταράμενος, cursed'.

ονομαν nom. sing. = Gr. ὄνομα 'name'.
 ορον 'high, up'.
 οτε 'ὅδε, thus' (?).
 ονεργον 'ιδίω' dat. < **swe-gnōy*.
 ονεκρον dat. from **swekrōy* 'father-in-law'.
 Feβqi dat. 'sister' (?) < **sweśr-i*.
 ουιτετο 'let him see' from **widetōd*.
 οντα 'curse', cf. Serbocroat. *uditi* 'to harm'.
 πατερος 'parents'.
 σα = τα 'τῇ', σα σορον (ο > υ) 'τῇ σορῶ', σα μαγκα, τα μαγκα 'dem Grabe'.
 σι 'this'; σεμοι(ν), σεμοι, σεμι(ι)ν 'to this' dat. sing.
 τα, ται, ταν, see σα.
 (ε)φυκμενος from **stetig-meno-s*; Gr. στίλβω 'tattoo as a mark of disgrace'.
 ιος = Gr. Διός from Ζεός; τιμον < **diwi-eyo-m* 'divinum' acc.
 ι (ιι, ιγ) = Gr. τι.
 ιοκ(ε) = L. *quisque*.
 τοτοσσ, τευτους 'civitatīs' from **tewto-*.

4.4.2. Characteristic Features of Phrygian

On the basis of the most probable interpretations it is possible, in general terms, to give the following characteristic of the comparative-historical phonology of Phrygian.

The Phrygian word βέκος 'bread' is attested in Herodotus, Hipponax, Hesychius, and in the Phrygian inscriptions. This is an *-es*-stem from IE **b^heges-* (gen. *-es-es*) and corresponds to the ONorse *baka*, Anglo-Saxon *bačan*, E. *bake* from **b^hog-*, OHG *bacchan*, G. *backen* from **b^hogn-*, Gr. φάγω 'to roast' from **b^hōgō*.

The Phrygian words βαλλιον and βάμβαλον 'φαλλός' are related to the Gr. φαλλός from **b^hlno-s*.

The interrogative (indefinite) pronoun κος and the relative pronoun ιος, which appear in the inscriptions, come from IE **k^wo-s* and **yo-s*.

The noun τευτους 'civitatīs' gen., which appears in the inscriptions as corresponding to Gr. δῆμος 'people', is related to Goth. *biuda*, OHG *diot(a)*, Lett. *tāuta* 'people', Osc. *touto* 'civitas' from IE **tewt(ā)*.

The noun ονομαν, which appears in the inscriptions, corresponds to Gr. ὄνομα 'name' from **onomn*.

The Phrygian verbal form ουιτετο corresponds to the Latin verbal form *vidētō* 'let him see'.

Gen. sing. ιος 'god's' is derived from **diw-os* and corresponds to Gr. Δι(F)ός (Haas).

The Old Phrygian dat. sing. Feβqi '(sorori)' comes from IE **sweśr(e)i* (Haas).

The late Phrygian word ονεκρον dat. 'father-in-law' comes from **swekro-s* (Haas).

These Phrygian words are enough to establish the most typical features of the comparative-historical phonology of Phrygian. The main conclusions are the following:

IE *o* is preserved: βεκος, ιος, κος, ονομαν, ιος.

IE \bar{o} shifted into u : $\delta\omicron\upsilon\mu\omicron\varsigma$.

The IE diphthong ew is preserved: $\beta\epsilon\omicron\sigma\sigma\iota$ 'φεύγοι', $\tau\epsilon\upsilon\tau\omicron\upsilon\varsigma$.

IE syllabic l, n shifted into al, an : $\beta\acute{\alpha}\mu\beta\alpha\lambda\omicron\nu$, $\beta\alpha\lambda\lambda\acute{\iota}\omicron\nu$, $\zeta\epsilon\nu\mu\alpha\nu$, $\omicron\nu\omicron\mu\alpha\nu$.

IE initial y is preserved: $\iota\omicron\varsigma$, $\iota\alpha\nu$.

The IE voiced stops (mediae) became voiceless (tenues) ($M > T$): $\beta\acute{\epsilon}\kappa\omicron\varsigma$.

The IE voiceless stops shifted into voiceless aspirates ($T > TA$, as in Armenian); the aspiration was too weak and for this reason it was very often not marked: $\beta\rho\alpha\tau\epsilon\rho\epsilon$, $\tau\epsilon\upsilon\tau\omicron\upsilon\varsigma$.

The final $-m$ shifted into $-n$ as in Greek.

The IE cluster sw shifted into $(h)w$: $F\epsilon\beta\rho\iota$, $\omicron\nu\epsilon\kappa\rho\omega$.

The cluster sr shifted into br as in Latin: $F\epsilon\beta\rho\iota$.

The most typical features of the Phrygian historical phonology are given in Table 8.

Table 8
Typical Features of Phrygian

Indo-European	Phrygian
e	e
o	o
\bar{e}	$e, i, (a?)$
\bar{o}	o, u
ew	eu
n (η)	an
l, r	al, ar
M(ediae)	T(enues)
MA(spiratae)	M
kt	$tt(h)$
$s-$	$s- > (h- >) \emptyset$
sw	$(hw- >) w-$
$-sr-$	$-br-$

4.5. Thracian, Dacian (Daco-Mysian), and Phrygian

Each IE language branch (for instance, Latin, Germanic, Slavic) is a specific deviation from the norm of the common IE, a new aspect, which is different from the others. The Latin from which the so-called Romance languages — French, Italian, Rumanian, etc. — originated is such a deviation. Meillet wrote in his book *Linguistique historique et linguistique générale* 1948: 78): "To say that some languages belong to the same group means that they represent differentiations from an older language: the related languages are actually the same language which has changed in different ways through the centuries."

Let us now compare the most typical features of the historical phonology of Dacian (Daco-Mysian), Thracian, and Phrygian (see Table 9).

Until recently one usually spoke of a single "Thraco-Daco-Phrygian" language which was simply called Thracian: Phrygian was sometimes considered to be a Thracian dialect, while Dacian has always been identified with Thracian. Is it correct to consider Thracian, Dacian, and Phrygian as

Table 9

Typical Features of Dacian (Daco-Mysian), Thracian, and Phrygian

IE	Dacian	Thracian	Phrygian
<i>e</i>	<i>ie</i>	<i>e</i>	<i>e</i>
<i>o</i>	<i>a</i>	<i>a</i>	<i>o</i>
<i>ew</i>	<i>e</i>	<i>eu</i>	<i>eu</i>
<i>aw</i>	<i>a</i>	<i>au</i>	
<i>r, l</i>	<i>ri, (ir)</i>	<i>ur, (or), ul, (ol)</i>	<i>al</i>
<i>ŋ, ŋʷ</i>	<i>a</i>	<i>un</i>	<i>an</i>
<i>M(ediae)</i>	<i>M</i>	<i>T</i>	<i>T</i>
<i>T(ennes)</i>	<i>T</i>	<i>TA(spiratae)</i>	<i>TA</i>
<i>tt, (dt, dʰt)</i>	<i>s</i>	<i>st</i>	
<i>s-</i>	<i>s-</i>	<i>s-</i>	<i>o (?)</i>
<i>sw-</i>	<i>w-</i>	<i>s-</i>	<i>w-</i>
<i>sr-</i>		<i>str</i>	<i>-br-</i>

dialects of a common language which was a specific deviation from common IE? In view of the data discussed above it is impossible to give a positive answer to this question.

Dacian, Thracian, and Phrygian actually have many features in common but this is due to the fact that they are related IE languages. However, if we take into consideration the differences between, for instance, the treatment of IE syllabic liquids and nasals, of IE voiced and voiceless stops in Thracian and in Dacian, of IE short *o* in Thracian and Phrygian, of IE sibilant *s*, and of the clusters *sw*, *sr*, the conclusion must be drawn that these languages cannot have originated from one common "Thraco-Daco-Phrygian" form. Their common form was common IE. Thus IE was the common language of Thracian, Dacian, and Phrygian, and not any other intermediate language between IE and these three languages. Thracian, Dacian, and Phrygian cannot be derived from a "Thraco-Daco-Phrygian" language, as is possible, for instance, with the Slavic languages, which are derived from Proto-Slavic, or the Romance languages, which are derived from Latin.

Consequently, Thracian, Dacian (Daco-Mysian), and Phrygian, despite the fact that they are related, are three different and specific Indo-European languages which cannot be reduced to a common language.⁷

4.6. Daco-Mysian, Illyrian, Thracian, Albanian, and Rumanian

For a long time there has been much discussion about whether Albanian is the descendant of Illyrian or of Thracian. Miklosich (1862: 4-5), Meyer (1888, 1904-06: 1038), Kretschmer (1896: 262-263), Jokl (1924), and others are of the opinion that Albanian originated from Illyrian. But Hirt (1898; 1905-07: 141-142), Weigand (1927: 277-278), Dečev (1960: 190-198),

⁷ On Daco-Mysian, Thracian, and Phrygian as three different IE languages see Georgiev 1957b: 70-79; 1958d: 89-99; 1960b: 108-115; 1977: 201-204, 217-221.

Barić (1954), and others have tried to prove that Albanian is the descendant of Thracian.

However, now when it is clear that Daco-Mysian and Thracian are two different IE languages, the problem of the origin of Albanian can be viewed in an entirely different light.

Daco-Mysian is scarcely known but on the basis of the principle features of its phonological system it can be definitively proved that the Albanian phonological system originated from Daco-Mysian and that certain specific features of the historical phonology of Rumanian came from the Dacian substratum. For this reason the **Albanian language is the contemporary descendant of Daco-Mysian**, while Daco-Mysian is the most ancient stage of the development of Albanian from IE.

4.6.1. The Comparative-Historical Phonology of Daco-Mysian and Albanian

IE *a* (ə) = Dac., Alb. *a*:

Salsovia (inscription; *IA*; *ND*; *TP*), a town between Aigissos and "Αἰγυῖς Lake, now called Mahmudia, in north Dobrudja. As the Greek name "Αἰγυῖς (from ἄλμυρός 'salty') shows, *Salsovia* corresponds to the Latin adjective *salsus* 'salty' from **sald-to*.

Salmorude (*IA*), *Palus Salameir* (Chron. Ronc.) is the name of a salt lake (now called, Razelm) to the south of the delta of the Istros River; the name was translated into Greek as "Αἰγυῖς (Proc., Hierocl.; Pliny). *Salmor-* (and *Salameir*) are derived from **salmuro-* and correspond exactly to the Gr. ἄλμυρός 'salty' from **salmuro-s*.

Dac. *dies-apter* 'common mullein': Gr. ἄπικτα 'wick' (see section 4.1).

There is aphaeresis of initial protonic *a* (from IE *a*, *ə*, *o*) exactly as in Albanian and Rumanian (Dacian substratum), cf. Alb. *tētē* 'eight' from **ok-tō-ti*, Rum. *miel*, Meglenian *mniel* 'lamb' from L. *agnellum*, Rum. *noaten* 'one year-old lamb' from L. *annotinum*:

ζωοδόμηι 'ποταμογενέτωρ' from **əkwā-domē* (see section 4.3.2.1).

Zisis (*GR*) from *Azizis* (*TP*).

IE *e* > Dac. *ie*, Alb. *je*. IE (stressed) *e* shifts in Albanian into *je*: Alb. *pjek* 'to bake' = OBG *pekq*, Alb. *vjet* 'year' = Gr. *Fétos*, Att. *ἔτος* 'year'. L. *e* shifted in Rumanian into *ie* (Dacian substratum): L. *pectus* > Rum. *piept* 'bosom'. Examples:

Dac. *Bēssoi* (Sol.), the name of a Dacian tribe, but Thrac. *Bēssoi* (Strabo and others), *Bessi* (Caes., etc.), *Bhssoi* (Hdt.), *Bhssoi* (Eust.), the name of a Thracian tribe.

Diegis (Dio Cass.) is the name of a Dacian king and *Degis* (Martialis) is a Dacian personal name. Probably this name is derived from **d^hegwh-i-s*, approximately 'hot (head)', a derivative (*nomen agentis*, *nomen actionis*) from **d^hegwh-* 'to burn', cf. Alb. *djek* 'to burn, to kindle', Lith. *degù*, *dègti* 'to burn', Skt. *dahati* 'burns'.

**Iēgassos* (Ptol.), *Gerasus* (Amm. Marc.; *ge* = *ye*), now the Siret River in Dacia, from **eroso-s*, cf. Skt. *rāsa-h* 'humidity, liquid' from **roso-s*, *rasā* 'humidity' = *Rasā* a river name = Av. *Ranhā* (i. e., *Rahā*) from **rosā*, Gr. ('Pelasgian') *Ἐρασῖνος*, the name of four rivers in Greece, Gr. *ἀπ-ροῦω* 'to pour liquid, spit' from **erās-*, Bulg. *Ros-ita*, *Ros-ica*, a river name.

dielina 'henbane' = Arm. *delin* 'greyish, pale' (see section 4.3.2.1).

Tsierna (*Tsiernensis* in an inscription from 157 A. D.), *Tierna* (TP), *Zerna(e)* (ND; Ulpianus), *Ζέρης* (Proc.), *Dierna* (inscription), *Δέρνα* (Ptol.), a place on the north bank of the Danube in southwestern Dacia, now called Orșova, on the Cerna, a tributary of the Danube. As can be deduced from the Slavic (Bulgarian) name *Cerna* = *černa* 'black' from **k(w)ṛ(a)snā*, the Dacian name is derived from **k(w)erhsnā* with the phonetic shift *k(w)e* > *k'ie* > *t'ie* > *é(i)e*.

But after an (initial) palatal *ie* (from *e*) shifted into *e* (a secondary development) as in Albanian and Rumanian (Dacian substratum), cf. Alb. *pesë* 'five' from **pe(n)cye* < IE **penkʷe*, Rum. *cer* 'sky' from **cier* < L. *caelum*. For example:

Tsierna, *Zerna(e)*, *Ζέρης* (late forms).

IE *e* > Dac. *ia* under the influence of *a* (or *e*) in the following syllable; after an (initial) palatal *a* appeared in this case. The same change is found in Rumanian as a Dacian substratum, cf. L. *petra(m)* > Rum. *piatră* 'stone', L. *terra(m)* > Rum. *țară* 'earth'. The situation is similar in Albanian: Alb. *dhjamë* 'lard, fat' from **demā*, cf. Gr. *δηνός* 'fat'; Toscan *gjarpër*, Gegan *gjarpën* 'snake', cf. L. *serpens*, Skt. *sarpāḥ* 'snake'; Alb. *shatë* 'hoe' from **sek-tā* (-ti-?) from **sek-* 'to cut'; *çanç* 'to split' from **sked-nyō*, cf. Gr. *σκεδάσκει, σκίδνμι* 'to scatter here and there', Skt. *skhādāte* '(he) splits'. The following are examples:

σκιόνη 'dipsacus fullonum (thistle)' = **skiarā* from **skerā*, cf. Alb. *shqer* 'to tear' (see section 4.3.2.1).

ζορίττα 'couch-grass' from **kāt-ent-ā* (see section 4.3.2.1).

The shift *en* > *in* (in a closed syllable) appears in Dacian, Albanian, and Rumanian, cf. Rum. *vînt* 'wind' from L. *ventus*:

Pincus, now called *Pek*, a tributary to the Danube in Upper Mysia, from **penko-s* = Skt. *pañka-ḥ* 'mud, marsh'.

Tzintā, *Tsinta*, *Tzinto*, a Dacian personal name, from *Κέντος*, -centus.

IE *i* = Dac. Alb. *i*: Dac. *διέσεμα* 'common mullein' from **dies-ewsmṃ* (see above).

IE *o* > Dac., Alb. *a*:

Καρπάτης (Ptol.) from **korpā-tā* (or -o-) 'rocky', cf. Alb. *karpë* 'rock, big stone' from **korpā*, cf. Pokorny 1951-69:944.

Μάρις (Hdt.), *Μάριος* (Strabo), *Marisia* (Iord.), now called Rum. *Mureș-ul*, Hung. *Maros*, a left tributary to the Tisza, from **morisyo-*, cf. OIr. *muir* (gen. *mora*) m., Cymr., Cornish, Bret., *mor* 'sea', Gall. *Morini*, *Are-mori-ci* 'living near the sea', *mori-marusa* 'mare mortuum', etc., see Pokorny 1951-69:748 (L. *mare* 'sea' is a borrowing).

IE *u* = Dac., Alb. *u*: *Ἀξιόποτα*, *Ἀξι-οὔπολις* 'black water', cf. Lith. *ùpė* 'river', diminutive *upėlis*.

IE *ā* > Dac. *ā* (> *â*) > later *o* = Alb. *o*:

IE *ā* shifted into Alb. *o*. The beginning of this shift is found in Dacian towards the 3rd century A. D. The name of the town of *Δοκίδαβα* in north-west Dacia, mentioned by Ptolemaeus (the middle of the 2nd century A. D.), was declared by Pärvan to be an error instead of **Daci-dava* 'town of the Dacians'. Actually *Δοκίδαβα* is one of the first examples of the shift *ā* > *o*, cf. *Δάκωι*, L. *Dāci*.

The same shift took place in the cases in which *o* shifted into *oa* as in Rumanian, cf. Rum. *roată* 'wheel' from L. *rota(m)* (*o* > *oa* under the influence of the vowel *a* or *e* in the following syllable, Dacian substratum):

Dac. *κοαδάμα* 'ποταμογείτων' (Diosc.) from **κοδαμα* < IE **akwādomi* or *κοα-... k^wa*. Dioscorides lived during the middle of the 1st century A. D. but the lists of synonyms were added to his original texts towards the end of the 3rd century A. D., so that at least several of the Dacian plant names found in Dioscorides are probably from the 2nd or 3rd century.

Dac. *sipoax*, v. l. *sipotax* – **siptoax* from **sept-āk(o)*- (see section 4.3.2.1).

IE *ē* > Dac. *ā* > *ā* > later *ā*, *o* = Alb. *o*:

The typical shift IE *ē* > Alb. *o* is attested in Dacian. This is an important evidence for the close relationship between Dacian and Albanian. As was already mentioned, there are 46 (or 51) local names with the Dacian word *dava* (*deva*) 'town': *Acidava*, *Rusidava*, *Sacidava*, *Sucidava*, etc., 29 of them come from Dacia (contemporary Rumania): in this region *dava* always appears with *a*. The other 9(10) are from Moesia Inferior or Scythia Minor (contemporary Dobrudja): in this region *dava* is usually used but *deva* appears twice. Another 7 (or 8) names come from Dacia Mediterranea and Dacia Ripensis (the eastern part of Moesia Superior); 4 of them have *dava* and 3 *deva*. Only *Pulpudeva* comes from Thrace, however we know that the Macedonian king Philip II (359-366 B. C.) founded this city and gave it the Greek name *Φιλιππό-πολις* – Thrac. (actually Daco-Mys.) *Pulpu-deva* (Iord.). OBG *Plüpp-diwū* (12th century), contemporary *Plovdiv*, is derived from **Pulpu-dēva* (*ē* – *ē*). Between the 4th and 1st centuries B. C. a change *e* > *ā* > *a* took place in Dacian: the oldest dated examples are from the middle of the 1st century A. D. (*Αργεδων* and *Desudaba*).

There are also two late names with *dova*: *Pelen-dova* (TP; after the 3rd-4th century A. D.) and *Gil-doba* (Acta SS). Until now the form *dova* had been considered as an error instead of *dava*. Actually, it reflects the late shift of *ā* into *o*.

The name of the town of *Pelen-dova* (on the lower part of the Jiul River in southwestern Dacia), which is recorded after the 3rd-4th century A. D., also illustrates the intermediary stage of the Albanian shift of IE *ē* > Alb. *o*. This name is identified with *Πολόνδα* instead of *Πολόνδα(να)*, which is recorded in Ptolemaeus (during the middle of the 2nd century A. D.). Thus the following stages of phonetic development can be outlined: *Πολόνδα(να)* (2nd century A. D.) = **Pōlon-dāva* or *Pōlōn-dāva* > *Pelen-dova* (3rd-4th century A. D.) with *ō* > *e* and (*e*) > *ā* > *o*, as in Albanian. *Pelen-dova* is derived from *Πολόνδα(να)* < IE **polōm-dh^{ew}ā* 'Stutt-gart', cf. Alb. *pelē* 'mare' (f. from **pōlo-s*), Gr. *πῶλος* 'stallion', Arm. *ul* 'kid' from **pōlo-s*.

The same applies to the name of the town of *Gildoba* which is probably the later form of the name of the town of *Giridava*.

The situation is the same with the Dacian place name *Patawissa* (TP), *Patabissa* (GR), *Παταύισσα* (Ptol.) instead of *Παταουισσα*, the ethnonym *Patavis(s)e(n)sis* (inscription) together with *Potaisa* (inscription), now called Turda, south of Cluj. The name is probably derived from *(s)*pēto-wik-m* (acc. > nom.) 'large village', cf. Skt. *sphāta-* 'big, strong' from **sp^(h)ēto-*, Arm. *p^{ar}art^{am}* 'plentiful' from *(s)*pātr-* (without *s*; see Pokorny 1951-69: 983), and Alb. *vis* 'place', Skt. *viś-* f. 'habitat, house', Av. *vis-am* acc. 'house, village, kin', OBG *viši* 'village' from **wik-*. This name could also be of Iranian (Sarmatian, Jazygian) origin but the phonetic shift *ā* > *o* is Dacian. On this name cf. G. *Gross-dorf*, Rum. *Satu mare*, Bulg. *Goljamo selo* 'big village'.

IE $\bar{o} >$ Dac. $o^i > \bar{o} >$ later $e =$ Alb. e . The older stage of the shift $\bar{o} > e$, which is characteristic of Albanian, is found in Dacian. This is new important evidence for the close relationship between Albanian and Dacian; the following are examples:

Dac. $\kappa\iota\tau\text{-}\sigma\acute{\iota}\beta\omicron\iota\lambda\alpha$ 'μήλωδορος' = Lith. *šūn-obuolas*, literally 'dog apple', from **kun-ābō-lo-s* (see section. 4.3.3) : $\bar{o} >$ Dac. $oi (= \bar{o})$.⁸

Πολόνδα(να) (middle of the 2nd century A. D.) $>$ *Pelen-dova* (3rd-4th century A. D.) from **pōlōm-^{dh}ewā* 'Stuttgart' (see above). The last stage of the phonetic shift $o > o^i > \bar{o} > e$ was thus reached during the 4th century A. D.

Salmor-ude (IA; 3rd-4th century A. D.) 'salty water' with *-ude* from **udō(r)* 'water' (see section 4.1): the shift $\bar{o} (> \bar{o}) > e$ was consequently reached during the 3rd or the 3rd-4th century A. D.

IE $\bar{u} >$ Daco-Mys. $u^i > \bar{u} =$ Alb. $y (= \bar{u})$ and i :

The Daco-Mysian phonetic shift $\bar{u} > u^i > \bar{u} = y$ is found in the name of the Mysians. The oldest form is with u : *Μυσοί* (*Iliad*, etc.), L. *Mysi* (Livy, etc.). Later, however, the name appears as *Μοισοί* (Strabo, etc.) = L. *Moesi* (Pliny, inscriptions) as well as *Moyses* (Iord.). Since in late Greek u shifted into \bar{u} , while in Latin oi went through the change $oe (\bar{o}) > e$, the Daco-Mysian diphthong u^i , respectively uy , which was alien to Greek and Latin, was written in Gr. $oi =$ L. oe . When the Daco-Mysian u^i shifted into \bar{u} it completely corresponded to the late $r = \bar{u}$. In Latin such a phoneme was non-existent and therefore it was written in late Latin as *oe*, *e*, *y* or *i*.

IE $ay =$ Dac. ai , a ? The treatment of IE ay in Albanian is not clear. Some Albanologists think that IE ay shifted into e in Albanian; according to Pisani (1959b: 99-100) IE ay shifted into Alb. a . Unfortunately, there is no reliable evidence. The data from Daco-Mysian support the second hypothesis

The name of the Dacian colony *Αἰζίδας* (Ptol.; the middle of the 2nd century A. D.), probably on the Pogaň river, a tributary of the Timiș in Banat in southwestern Rumania), *Aizis* (Prisc. VI, 13; 1st-2nd century A. D.) appears later in the form *Azizis* (TP; 2nd-3rd or 3rd-4th century A. D.) and *Zizis* (GR). This place name may be explained from **ayg-īsyō-*.

Dac. *adila* 'φονίκερον, ἐρωθιμόν' from IE **aydh-ilo-* (see section 4.3.2.1).

IE $ey (\bar{e}y) >$ Dac. $e (\bar{e}) >$ Alb. i :

$\sigma\acute{\epsilon}\beta\alpha$ 'elder, hollow tree' - Lith. *šeivā* 'pipe, tubule' from **kēywā* (see section 4.3.2.1).

IE $aw (\bar{a}w) >$ Dac. $a (\bar{a})$, Alb. a :

Dac. *δάκρυα* 'a kind of anemone' from **dhāw-k-ino-* (see section 4.3.2.1).

Δάκρυα, *Δακρύα*, *Δάκρυα* derived from **dhāw-ko-s* 'wolf' (see section 4.1).

IE $ew >$ Dac., Alb. e :

Dac. *διέσσημα* 'common mullein' from **di(y)es-ewsmā* (see section 4.1).

IF $f >$ Dac., Alb. ri (stressed):

Κρίστος, contemporary Ruin. *Criș(ul)*, a river name, from **k(w)ṛhso-s* 'black' (see section 4.1).

IE $\bar{u} >$ Dac., Alb. a (stressed):

**Αἰζίδας*, **Αἰζίδας*, **Αἰζί-οπα*, **Αἰζι-ούπολις*, the Daco-Mysian name of a river and a locality, from **ṛ-k̑s(e)y-* 'dark, black' (see section 4.1).

⁸ As far as orthography is concerned cf. *cinoglossa* (Pseudo-*Ap.*) = *κινρόγλωσσον* (Diosc.).

Dac. *βοιδαθλια* (Diosc.), *budama* instead of **budadla* (M instead of *A1*; Pseudo-*Ap.*) '*βοιγλωσσον*, lingua bibula, bull's tongue'. As the Greek, Latin, and English names show, *βοιδαθλια* = **budadla* is derived from **gʷōw-dygh(w-e)-lā* or *(-u-lo-)*, a compound word from **gʷōw-* 'bull' and **dyghwā*, cf. OL. *lingua*, Goth. *tuggo*, E. *tongue*.

Meyer (1883:92; 1884:332; 1885:42) and Jokl (1923:286; 1924:91) assumed that the IE syllabic *ŋ* shifted into *e* or *ēn, un* in Albanian. The examples adduced for the phonetic change of IE *ŋ* (*ŋ*) > Alb. *e* show, however, that this is a secondary *e* derived from an older *a*, cf. IE **albhi* > Alb. *elp* (*elb-i*) 'barley' (umlaut) = Gr. *ἄλφι* 'barley'. Vasmer (1921:39-40) and Barić (1954:16-17) proved that IE *ŋ, ŋ* shifted into Alb. (when stressed) *a*. Examples are IE **wikŋ-ti-* > Dac. **wisati-* > Alb. **(v)zāti-* > (*njē*)-*zet* 'twenty', Alb. *ē-sell* 'hungry' from **u + sill(e)* 'without lunch': *u* > *a* > *ā* (umlaut) > *e*. The shift IE *m* > Alb. *a* is obvious from IE **septm-t-* > Alb. *shtā-te* 'seven' in which *a* is derived from IE *ŋ* (stressed). The following examples are especially clear: Alb. *gjatē* 'long' which derives from **dlygh-to-* and not from **dlongh-to-* since in this case one would expect Gegan **gjandē*, Toscan **gjendē*; Alb. *mat* 'bank' is related to Av. *nati-* 'mountain, hill' from **myt-* (Georgiev 1977:232-3). Alb. *nëntē* 'nine' comes from **néwn-ti-* and the second example Jokl adduced, *mënd, mund* 'may, conquer', is not reliable since it is not possible to establish the phonetic form (*e, ē, o, ō, u?*) of the root **mendh-* (see Pokorny 1951:69:730). According to Čabej (1964), Alb. *mund* is derived from **(s)mog-nō*.

Therefore, the IE syllabic nasals appear in Dacian and Albanian in the same way. The IE consonants *l, r, n, m, p, t, k, b, d, b^h, d^h, g^h* appear in the same way in Dacian and in Albanian: there is nothing special about them. It should be mentioned only that the phonetic shift *dī (dy)* > *zi (z)* is a specific feature of Albanian as well.

Zia f., a Dacian personal name, from **Dia*, in two inscriptions: *d. m. Ziai Tiati fil Dacae uxori Piepori regis Coisstobocensis. Zia f(ilia) Cerceni Cardentis* (an inscription from the region of Svištov on the Danube in Moesia Inferior).

Zi-per 'god's son', name of a Mysian, cf. *Δι-περος, Δι-περος*, Dac. *per* 'son' from **pwerō-s* (see above).

Dac. *diodela* > *ziodela*, a plant.

The following phonetic shift is typical of Daco-Mysian and of Albanian: IE *tt* (*dt, d^ht*) > *s*; cf. Alb. *pasē* 'he had' from **pot-to-* (see Jokl 1924:90):

Salsovia, a town in contemporary northern Dobrudja, from **saldt-*, cf. L. *salsus* 'salty'.

The treatment of the so-called palatals and labiovelars is the same in both languages:

IE *k'* > Dac. *s* (*ḡ*), Alb. *s, th*:

Dac. *σέβα* 'elder' ~ Lith. *šeivā* 'pipe, tubule' from **kēiṃā*, cf. Lith. *šeivā-medis* 'elder' (see section 4.3.2.1).

IE *g', g^h* > Dac. *z* (*d*), *d*, Alb. *z, dh, d*:

Αἰζίαίς, a Dacian place name, from **ayg-Is(yo)-* (see above).

Dac. *ζήρα* 'hemlock' (Diosc.), a poisonous plant, from **gyēnā* = Skt. *jyānay-*, Av. *zyānā-* 'harm' (see above).

Dac. *μτζήρα* 'thyme' from **m(e)ygh-* (see above).

Dac. *βοι-δαθλια* (Diosc.), *budama* instead of **budadla* (Pseudo-*Ap.*; M instead of *A1*) '*βοιγλωσσον*, bull's tongue' from **gʷōw-dygh(wē)lā* (see above): *θ* = *ḡ* instead of *d*.

Dac. *-dela*, *-δηλα*, *-δελ(λ)α*, *-zila*, *-tilia* 'herb' from **ghel(i)yo-m* = Russ. *zelje* 'herb' (see above).

IE *k^w*, *g^w*, *g^{wh}* > Dac. *k*, *g* before an *e*, *i*, but *k^w*, *g^w* and after the 1st-2nd century A. D. *p*, *b* before an *a*, *o*; Alb. *k*, *g* (dialectal difference):

Dac. *καθαδία* 'ποταμοεικτον' from IE **akwā-domh₂* 'having water as a house' (see section 4.3.2.1), probably a labiovelar preserved during the 1st century A. D.

Τάπαι (Dio Cass., 2nd-3rd century A. D.), a place name, now called *Železni vrata*, on the Danube east of Belgrade; this place is characterized by the swift flow of the river: from IE **tokwōy* (pl. from **tokwō-s*) 'flow' > Dac. **takway* > *Τάπαι*, related to Av. *taka-* m. 'flow, stream' = OBG *tokū* 'stream'.

Dac. *βοι-δάθλια* (Diosc.) with *β* from IE *g^w* before *ǵ* (1st, 2nd or 3rd century A. D.).

Gabranus,⁹ a river in Istria (north Dobrudja), probably from **g(w)abh₂r-*, **g^wmbhr-* or **g^wobhr-*, cf. Skt. *ga(m)bhīrā-*, Avest. *jafra-* 'deep'.

IE *k^w*, *g^w*, *g^{wh}* (and the secondary *k*, *g*, *g^h*) before *e*, *i* (*y*) > Dac. *k'*, *g'* > *t'*, *d'* > *č* (= *č*?), (*d*)*z* > Alb. *s*, *z*. In Albanian the IE *k^w*, *g^w*, *g^{wh}* before *e*, *i* (*y*) appear as *s*, *z*. The preceding stages of this phonetic shift are recorded in Dacian. In Dacian the IE *k^w*, *g^w*, *g^{wh}* became *k*, *g*. During the 1st century B. C. *k*, *g* were palatalized before *e*, *i* (*y*) into *k'*, *g'*, shifting most probably during the 1st-2nd century A. D. into *t'*, *d'*, thereafter into *č* (= *č*?), *dz* and finally into *s*, *z*.¹⁰

Tierna, *Dierna*, *Μεσηνα*, *Tsierna*, *Zerna*, *Ζερνης* from **k(w)er(h)suā* 'black' (see above): *k(w)e* > *k'e* > *t'ie* > *čie* > *če* > *se*.

Tzinta, *Tzinto*, *Tsinta* m., *Tzintina* are Dacian anthroponyms which correspond to the Thracian *Κιντος*, *Cintis*, *Κεντις*, *Κερθος*, *Ανζα-κενθος*, *Ανλου-κενθος*, etc.

The name of a Dacian town *Germisera*, *Germigera*, *Germisara* appears in different manuscripts by Ptolemaeus as *Γερμιζερα*, *Γερμιζιρα*, *Γερμιζερα*, *Ζερμιζιρα*. Because of the hot springs at this place the name is interpreted as *γεμ(i)-* 'hot' and *sara*, *zera* 'spring, river'. As one can conclude from the written form, which is *Germigera* and not *Germisera* (or *-z-*), the Latin letter *g* stood for a *g* before *a*, *o*, *u* but (*d*)*z* or (*d*)*ž* before *e*, *i*. The alternation between *Γερμ-* and *Ζερμ-* from **g^{wh}erm(i)-* means that during the 2nd century A. D. the old *g* before *e*, *i* shifted into *g'*, *d'* and even partially to (*d*)*ž* or (*d*)*ž*. Thus we find the beginning of a process of palatalization through which these phonemes finally became *s*, *z*.

IE *s* = Dac. *s*, *š*, Alb. *s*, *sh*, *th* (*h*):

Dac. *διόσυμα* 'common mullein' from **di(y)esewsm₂*, see above.

Κολαος, *Grisia*, *Gresia*, a Dacian river, from **k(w)er(h)so-* 'black' (see section 4.1).

Marisia, Rum. *Mureș-ul*, Hung. *Maros*, a tributary of the Tisza River, from **morisyo-*.

Salsovia, a place name, from **sald-t-* 'salty'.

IE *sm* > Dac., Alb. *m*:

Dac. *διόσυμα* 'common mullein' from **di(y)esewsm₂* (see section 4.1).

The threatment of the IE phonemes in Daco-Mysian and Albanian is clarified in Table 10. This table shows that the phonematic system of Albanian is the further development of the Daco-Mysian system. Therefore Daco-

⁹ According to Dečev and Russu this name is Thracian; according to Lambrino and Gerov it is Celtic, cf. the Celtic place name *Gabranus*.

¹⁰ *č* > Alb. *s* after 1000 A. D., cf. Ölberg 1968: 110.

Table 10

The Treatment of the IE Phonemes in Daco-Mysian and Albanian

Indo-European	Daco-Mysian	Albanian
<i>a</i>	<i>a</i>	<i>a</i>
<i>a-</i> , <i>o-</i> (atone)	—	—
<i>e</i>	<i>ie</i> (<i>e</i>), <i>ia</i> (<i>a</i>)	<i>je</i> (<i>e</i>), <i>ja</i> (<i>a</i>)
<i>en</i> (before consonants)	<i>in</i>	<i>in</i>
<i>i</i>	<i>i</i>	<i>i</i>
<i>o</i>	<i>a</i>	<i>a</i>
<i>u</i>	<i>u</i>	<i>u</i>
<i>ā</i>	<i>a</i> (= <i>ā</i>) > <i>o</i>	<i>o</i>
<i>e</i>	<i>ē</i> > <i>ā</i> > <i>ā̃</i> > <i>o</i>	<i>o</i>
(<i>i</i>)	<i>i</i>	(<i>i</i>)
<i>ō</i>	<i>oi</i> (> <i>ō</i>) > <i>e</i>	<i>e</i>
<i>u</i>	<i>ui</i> > <i>ū</i>	<i>y</i> (= <i>ū</i>), <i>i</i>
<i>ay</i>	<i>ai</i> > <i>aʔ</i> (atone ?)	<i>aʔ</i> (<i>e</i> ?)
<i>ey</i>	<i>e</i> (= <i>e</i>)	<i>i</i>
(<i>oy</i>)	<i>ai</i> ?	<i>e</i>)
<i>aw</i> (<i>āw</i>)	<i>a</i> (<i>ā</i>)	<i>a</i>
<i>ew</i>	<i>e</i>	<i>e</i>
(<i>ow</i>)	<i>au</i> > <i>a</i>	<i>a</i>)
<i>r</i> (stressed)	<i>ri</i> , <i>ur</i>	<i>ri</i> , <i>ir</i> , <i>ur</i> / <i>ru</i>
<i>u</i> (stressed)	<i>a</i>	<i>a</i>
Tenuis	T	T
Mediae	M	M
Mediae aspiratae	M	M
<i>d</i> , <i>d^h</i> before <i>i</i>	<i>d</i> > <i>z</i>	<i>z</i>
<i>tt</i> (<i>dt</i> , <i>d^ht</i>)	<i>s</i>	<i>s</i>
<i>k'</i>	<i>s</i> (<i>β</i>)	<i>s</i> , <i>th</i> (= <i>β</i>)
<i>g'</i> , <i>g'^h</i>	<i>z</i> , <i>d</i> (<i>d</i>)	<i>z</i> , <i>dh</i> , <i>d</i>
<i>k^w</i>	<i>k</i>	<i>k</i>
<i>k^w</i> , <i>g^{w/h}</i>	<i>g</i>	<i>g</i>
<i>k^w</i> before <i>e</i> , <i>i</i>	<i>k'</i> > <i>t'</i> > <i>č</i>	<i>s</i>
<i>g^w</i> , <i>g^{w/h}</i> before <i>e</i> , <i>i</i>	<i>g'</i> > <i>d'</i> > (<i>d</i>) <i>z</i>	<i>z</i>
<i>k^w</i> , before <i>ā</i> , <i>ō</i>	<i>k^w</i> (but after 1st=2nd century A. D. dial. <i>p</i>)	<i>k</i>
<i>g^w</i> , <i>g^{w/h}</i> before <i>ā</i> , <i>ō</i>	<i>g^w</i> (but after 1st=2nd century A. D. dial. <i>b</i>)	<i>g</i>
<i>s</i>	<i>s</i> (<i>β</i>)	<i>s</i> , <i>sh</i> , <i>th</i> (<i>h</i>)
<i>sm</i>	<i>m</i>	<i>m</i>
<i>sr</i>	<i>str</i>	<i>shtr</i>

Mysian is, in relation to Albanian, in the same position as Latin is in relation to the Romance languages: **Daco-Mysian is the language from which Albanian descends.**

4.6.2. The Origin of the Albanians and of Their Language

Hirt (1898; 1905-07:144), Jokl (1924), Weigand (1927), Skok (1928), Dečev (1960: 190-198), Barić (1954: 7-9; 1957; 1959), Šiadbei (1957), Georgiev (1957b: 70-74; 1958d: 76-79), Popović (1958, 1959a; 1959b; 1960b)

and others adhere to the thesis¹¹ that the original home of the Albanians was the central northern part of the Balkan Peninsula, i. e., the eastern part of Upper Moesia and the western part of Lower Moesia or approximately Dardania, Dacia Mediterranea, and Dacia Ripensis. Some new facts should be added here, the most important of which is that the phonological system of the Albanian language is the direct descendant of Daco-Mysian. The most important facts and considerations for defining the origin and the original home of the Albanians are the following:

(1) The Albanians are not autochthonous to the territory of contemporary Albania:

(a) The ancient (Illyrian) place names in Albania (or at least in northwest, west, and south Albania) which have been passed down from antiquity, such as *Shkodër* from *Scodra* (Livy), *Tomor* or *Tomarus* (Strabo, Pliny, etc.) did not come into Albanian directly: the hypothesis that these names have been constantly used in Albanian from the pre-Roman period until now is incompatible with the data of the Albanian historical phonology.

(b) Latin place names in Albania reveal Latin-Old Dalmatian specific features and not Albanian ones: Old Dalmatian (Western Balkan Latin), which developed on an Illyrian substratum, differs considerably from Rumanian (Eastern Balkan Latin).

(c) In antiquity the Adriatic coast did not belong to the region of Albanian colonization: Albanian maritime and fishing terminology is a mixture of borrowings.

(d) The comparatively small number of Old Greek borrowings is another negative feature which, together with other considerations, leads us to assume that the Albanian territory which now neighbors on Greece was acquired later.

(e) There is no mention of Albanians in the territory of contemporary Albania before the 9th century A. D., while place and proper names from the entire Albanian territory are mentioned in other documents from the 4th century onward.

(2) The original home of the Albanians was, on the one hand, near the original home of the Rumanian people, and, on the other hand, it was not completely isolated from Greek influence:

(a) As was mentioned above, a number of characteristic phonematic changes appear in Albanian, Rumanian, and Dacian. The most important changes are the following:

$e > ie$ except after a palatal;

$e > ia$ under the influence of the vowels a or e in the following syllable, but after a palatal a ;

$en > in$ in closed syllables;

$(t), d$ before $i > (t' > \acute{c}) > s$, $(d)z$;

k', g' before $e, i > t' > c$ ($= \acute{c}$?), $(d)z$ ($= d\acute{z}$);

$-n- > -r-$ in Albanian and (partly) in Rumanian.

¹¹ Pärvan (1926) expressed the opinion that between the 3rd and the 6th centuries A. D., the Albanians gradually moved from Dacia to their present territory. However, the evidence is insufficient and the period is quite late. This opinion is shared by Capidan (1922) and Philippide (1928: 800-805). On the assumption that the Albanians are the autochthonous population in Illyria see Čabej 1959 and Cimochowski 1958, 1960. See also Pollo, Buda, Frasheri, and Islami 1959: 28-33.

(b) The oldest Latin elements in Albanian originate from Proto-Rumanian, i. e., from Eastern Balkan Latin, and not from Dalmatian, i. e., from Western Balkan Latin, as for instance: *L. caballum* 'horse' > Rum. *cal*, Alb. *kal*; *L. cubitum* 'elbow, arm' > Rum. *cot*, Alb. *kut*; *L. resina* 'resin' > Rum. *răsină*, Alb. *rshinë*; *L. lucta* 'struggle' > Rum. *luptă*, Arumanian *luftă*, Alb. *luftë*, etc. Thus Albanian has not developed on an Illyrian basis.

(c) The correspondences of Latin words in Albanian and Rumanian show that during the 4th to 5th century A. D. Albanian developed in the same region as that in which Rumanian appeared: this territory was approximately ancient Dardania (approximately the territory of Niš, Sofia, and Skopje).

(d) In Rumanian there are about 70 words which have exact correspondences in Albanian¹² but the phonetic form of these Rumanian words is so specific that they cannot be explained as Albanian borrowings. These words belong to the Dacian substratum in Rumanian, while their Albanian correspondences were inherited from Daco-Mysian.

The elements in common between Rumanian (the Dacian substratum) and Albanian are another important proof for the fact that Albanian is the descendant of Daco-Mysian.

(3) There are concrete data which show that long ago the Albanians lived in the territory of ancient Dardania:

(a) The name *Δαρδανοί* (and the region *Δαρδανία*) can be explained as derivative of the Albanian word *dardhë* 'pear'.

(b) The contemporary form of the name of ancient *Naissos*, an important place in Dardania which is now called *Niš*, shows, through aphaeresis of the unstressed syllable, the linguistic mediation of Albanian, cf. Alb. *pyll* 'forest' from **pëyll* < Late L. *pa(d)ūle*.

(c) The central northern part of the Balkan Peninsula is the region where Old Albanian and Old Rumanian could develop in closest contact with each other.

(4) There are important data which clearly show that Albanian is the direct descendant of Daco-Mysian:

(a) The Albanian phonematic system is a further development of the Daco-Mysian phonematic system. This fact is of great importance: it shows that Daco-Mysian is the ancestor of Albanian.

(b) Despite the scarcity of Daco-Mysian linguistic material, there are several very important correspondences with Albanian and this is evidence for the close relationship between Albanian and Daco-Mysian. Below are several examples:

Dac. *amalusta* 'camomile': Alb. *ambël* 'delicious, sweet', see section 4.3.2.1.

Daco-Mys. *Βστ-εσπιος*, *Ουστ-εσπιος*, *Ουτ-ασπιος* (inscriptions from northeast Bulgaria = eastern Moesia), an epithet of a god, literally '*Αἶε-επιος*': cf. Alb. *vetë* 'ipse' and IE **ekwo-s* 'horse', cf. Detschew 1957: 56.

Dac. *Αγορβήτης*, *Drubetis*, *Drobeta(e)*, a place name, = Alb. *dru*, pl. *drutë*, Rum. *druete* 'tree'.

Ζεσού-ζεσφα, *Ζεσού-ζιτοφα*, *Γεσού-γεσφα*, *Germi-sara*, a town in Dacia, cf. Alb. *zjerm*, *zjarm* 'fire, heat' (see section 4.1).

Dac. *Καρπάτης* (*ῥος*): Alb. *karpë* 'rock'.

¹² See Rosetti 1958; Russu 1967: 119-121.

Dac. *mal-* 'bank' (*Dacia Maluenis* = *Dacia Ripensis*) = Alb. *mal* 'mountain, bank', Rum. *mul* 'promontory, bank' (Dacian substratum).

Dac. *μαρία*, *mantua* 'mulberry (blackberry)': Alb. *man*, dial. *mand* 'mulberry'.

Patavissa, *Patabissa*, *Παταβίσσα* instead of **Παταβίσσα*, *Patavis(s)e(n)sis*, later *Potavissa*, a Dacian place name, from **(s)pētō-wik-η*, Alb. *vis* 'locality, place'.

Πολόνδα(να), later *Pelendona*, a Dacian place name, from **pōlōm-dhēwā* 'Stutt-gart', cf. Alb. *pelë* 'mare', f. from **pōlo-s*.

Dac. *σμάση* 'thistle': Alb. *shqer* 'to tear, to prick', see section 4.3.2.1.

Daco-Mys. *Ὀβενδερίς*, *Vindenis*, a place in Upper Moesia: Alb. *vënd* 'locality, region, land'.

(c) The geographical distribution of the typically Daco-Mysian place names with *dava*¹³ reveals the general pattern of the penetration by the Daco-Mysians, i. e., by the Proto-Albanians, in the Balkan Peninsula, approximately in the region of the eastern part of what was later called Upper Moesia, i. e., Dardania, Dacia Mediterranea, and Dacia Ripensis.¹⁴

(d) The Albanian vocabulary has the largest number of words in common with Balto-Slavic.¹⁵ This fact is clear only when Albanian is viewed as the descendant of Daco-Mysian, because Daco-Mysian was in immediate contact with Balto-Slavic.

The Albanian language thus is the descendant of Daco-Mysian. Its relationship with Daco-Mysian is the same as the relationship of a Romance language to Latin. There is also an Illyrian component in Albanian but its basis is Daco-Mysian.

Daco-Mysian tribes occupied the central northern part of the Balkan Peninsula, approximately the territory of Dardania, during some very remote period. From there they gradually migrated into the territory of contemporary Albania.

4.7. Phrygian and Armenian

The Greeks knew that the Phrygians had lived on the Balkan Peninsula in the neighborhood of Thracians and Macedonians (Hdt. VIII, 73; Strabo VII, 295). The Phrygians were related to the Thracians. According to the *Iliad* (II, 862, III, 184f., XXIV, 545), the Phrygians were the eastern neighbors of the Trojans and had close familial bonds with them.¹⁶

Long ago the Phrygians occupied a position in the Balkan Peninsula which was central between the Greeks and Macedonians, Mysians and Thracians, Thracians and Pelasgians. This is clear from the variants of their name: (1) *Φρύγες*, (2) *Βούγες*, *Βούγοι*, *Βούγαι*, (3) *Βρίγες*, *Βρίγοι*, (4) *Βούκες*, *Βούκαι* (*Βούκαι*), *Βουκείς*. The initial form was **B^hrughes*. This name was adopted by the Greeks at a very early stage and was changed into *Φρύξ*, pl. *Φρύγες*; *Βούγες* (*Βούγοι*, *Βούγοι*), *Βρίγες* is the Phrygian, Daco-Mysian, and Macedonian form. *Βούκες*, *Βούκαι* (*Βούκαι*), *Βουκείς*, with dissimilation of the

¹³ The most southwestern town of the *dava* type of toponyms, i. e., *Θερμιδάνα* (Ptol. 2, 16, 7; Hellenized instead of **Zermi-dava*) is cited as being between *πόλεις μεσόγειοι* between *Scodra* and *Siparuntum*, i. e., approximately on the boundary of northeast Illyria.

¹⁴ The Dardanian culture, at least during the last centuries B. C., was in close contact with the Daco-Getan civilization of the same period, cf. Garašanin 1958.

¹⁵ Cf. Jokl 1963; Pisani 1959b: 115-119.

¹⁶ Cf. J. Friedrich 1941: 883-884.

aspiration and consonant shift, is the Pelasgian and the Thracian form. On the basis of data from antiquity and the considerations given above we could assume that the Phrygians originally lived in contemporary northern or central Macedonia.

According to the ancient authors, the Armenians were Phrygian settlers (*Φρυγῶν ἀποικοί*, Hdt. VII, 73; cf. also Eudoxos in St. Byz.). But the problem of whether Armenian and Phrygian are two dialects of the same language or two different IE languages has not been solved definitively. Among the Phrygian glosses there are indisputable examples in which the IE velars (the so-called palatals) appear as sibilants (or affricates):

ἀζήρ, acc. *ἀζέρα* 'πώγων', beard', cf. Av. *zanu-*, Gr. *γένος* 'beard'.

ἐζῆς (ζ instead of ζ?) 'hedgelog', cf. Lith. *ežys* 'hedgelog'.

ζέλκια 'greenery, vegetable', cf. Bulg. *zelka* 'cabbage', Russ. *zelen'* 'greenery, vegetable'.

ζέρτα 'πόλη, door' from **ghed-*, cf. Anglo-Saxon *geat* 'gate, door'.

ζεῦμα 'πηγή, spring', cf. Gr. *χεῦμα* 'which is poured, stream'.

On the basis of these glosses Kretschmer (1896: 229) and Jokl (1927: 143) thought that Phrygian was a *satəm* language. Meister (1911), Hermann (1922), and Pedersen (1945: 5), who considered Phrygian to belong to the *centum* group, explained these sibilants as the result of palatalization before *e, i*. But this assumption is hardly tenable since the preservation of the velar in cases such as *ζέλκια* cannot be explained. Haas (1939a; 1957: 454; 1961: 29) is inclined to consider these words to be borrowings from Thracian.

Phrygian is one of the components of Armenian. However, in Armenian there is also a Mysian (and most probably also a Thracian) component. As early as the 2nd millennium B. C. some of the tribes which at that time occupied the central part of the Balkan Peninsula — Phrygians, Paeonians, Dardaians, and Mysians — began to settle in Thrace and thus their language was superimposed on a Thracian substratum; some of these tribes later migrated to the northwestern part of Asia Minor.

Documents from Asia Minor which date from the end of the 2nd millennium B. C. mention a people which at different times lived in some parts of northern Asia Minor between the Propontis and Melitene and which was related to the Phrygians. These were the so-called *muški*: Assyr. *mušku*, Gr. *Μόσχοι*, *Μέσχοι*, L. *Moschi*, Hebr. *mešeh*, etc.¹⁷ The name *muški* is actually = *Mūs(oi)*¹⁸ 'Mysians' + the Armenian ending for the plural *-kʰ*.

The Georgians call the Armenians *somex-i*. As Kapancjan (1956a: 147) proved, the name *so-mex-i* has a Caucasian prefix *sa-* (> Georg. *so-*) with the meaning 'country, locality' and *-mex-* from an older **mesx-* = *Μέσχοι*, *Μόσχοι*.¹⁹

Thus the ancient ethnical name *Μουσῶι* < *Mūsōi* 'Mysians' is preserved in the Georgian name of the Armenians *so-mex-i*.

¹⁷ Cf. Goetze 1957: 179; Schmökel 1957: 133, 199, 267.

¹⁸ In Mysian this name was **Mūs-*.

¹⁹ The shift *ū > u_i* or *oi > ō > e* is typical of Mysian: cf. *Mvōoi* > later *Mōoiōi*, *Moesi* > *Mesi*.

The words in which IE *o* (and *oy*) shifted into *a* (and *ay*) probably belong to the Mysian component in Armenian, while the Phrygian component of Armenian IE *o* was preserved unchanged. Examples are:

aitnum 'I swell' from **oyd-nu-mi*, *aitumn* 'swelling': Gr. *οἰδάω* 'I swell', *οἶδμα* 'swelling'.

akn 'eye', pl. *ač-kē* from **okw-*.

atkcat 'poor, miserable' from **oliko-*, cf. Pokorny 1951-69: 667.

anun 'name' from **onomno-*: Gr. *ὄνομα* 'name'.

arawr = Gr. *ἀροστρον* 'plough'.

atamn 'tooth': Gr. *ὀδοός*, *-οντος* 'tooth'.

asr, gen. *asu* 'fleece, sheep fleece' from **pok-u + r*; *asvet* 'woolen' from **pok-*, cf. Pokorny 1951-69: 797.

ateam 'I hate', *ateli* 'hateful, enemy': L. *odium* 'hatred', *odor* 'odor' from PIE **xed-*, while Arm. *hot* 'smell' belongs to the Phrygian component.

audi 'sheep' from PIE **xew-i-*, while *hoviw* 'herdsman' from PIE **xewi-peh-* belongs to the Phrygian component.

haci 'ash-tree' from PIE **xesk-*, cf. Oícel. *askr* 'ash-tree', see Pokorny 1951-69: 782.

To the Mysian component in Armenian belong probably also *օշին*, *ջէլուա*, *ջետա*, etc. (see p. 144).

Other components of Armenian are revealed in the name *hay-k^c* — which brings these people close to the country of *Hayassa* — and also in the name *Ազմէնու*.

The Principal Ancient Ethnic Groups on the Balkan Peninsula, Established on the Basis of the Geographical Distribution of Onomastics

Today the Balkan Peninsula is populated by several large nationalities with different minorities living among them: Gypsies, Armenians, Jews, Tartars, etc.¹ There are also — mainly in the centre of the Peninsula — Arumanians (300,000) who speak a Rumanian dialect which is quite different from Daco-Rumanian, Megleno-Rumanians, whose dialect is similar to Arumanian, and to the west in Istria there are Istro-Rumanians.

Thus, compared to the other large peninsulas in southern Europe, the population of the Balkan Peninsula is very much differentiated from a demographic point of view. The main reason for this is probably the typical geomorphology of this region: deep valleys surrounded by high mountains or by the Danube River.

In antiquity and even earlier, when the population was scarce and the contacts between the various groupings hardly existed, the number of the different peoples and tribes on the Balkan Peninsula was no doubt larger than it is now.

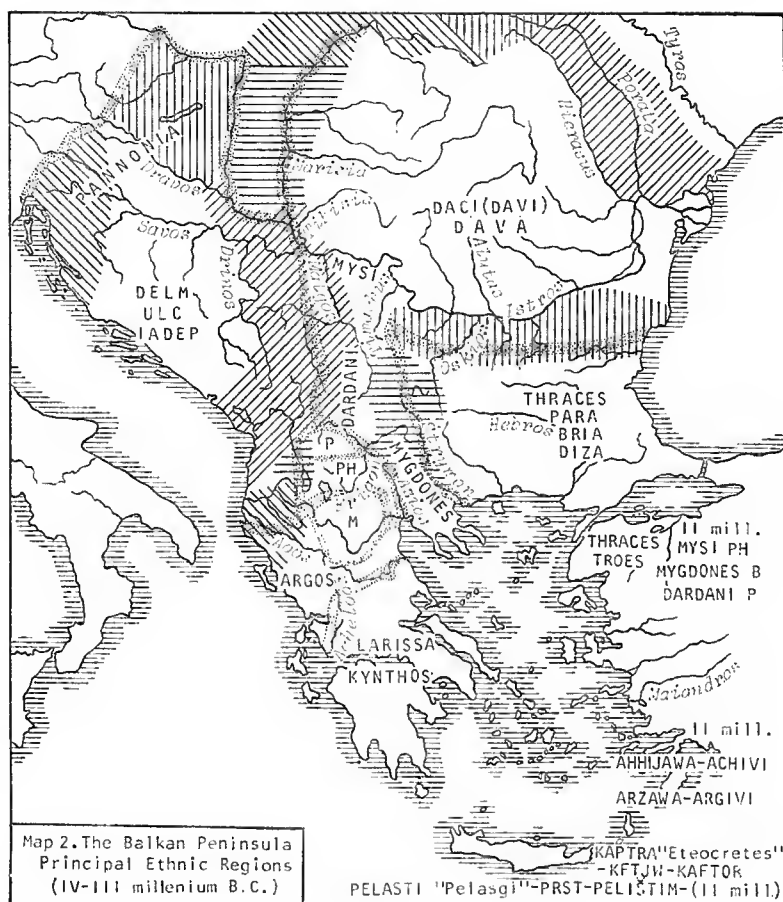
For instance, Yugoslavia is now populated by a number of nationalities and minorities² and thus it is not probable that during the 1st millennium B. C. only Illyrians lived in this region.

Another example is ancient Italy, i. e., the Italic Peninsula, which is twice smaller than the Balkan Peninsula. During the last few centuries B. C. there were many peoples and tribes in Italy. In the north there were Ligurians, Celtic tribes, Raetians, Euganeans, Venetians; in the center there were Etruscans, Umbrians, Picenians, Latinians, Sabellian tribes, Oscans; in the south there were Bruttians, Iapygians, Messapians, Greeks; and there were numerous minor tribes as well.

Thus it can be assumed that in antiquity there was a much greater demographic variety in the Balkan Peninsula than at the present time.

¹ For instance in Bulgaria, according to the 1965 statistics, there are 606,000 Turks, 197,000 Gypsies, 22,000 Armenians, 10,500 Russians, 7,500 Greeks, 6,000 Jews, 6,000 Tartars, 4,000 Rumanians, 2,000 Karakachans, etc.

² See the official Yugoslav statistics for 1953.



About 30 years ago the linguists, historians, and archaeologists distinguished three ethnic groups who lived in the territory of the Balkan Peninsula (Dacia and Pannonia included) in antiquity; Greeks in the south, Thracians in the east and Illyrians in the west. Furthermore, even now the view is widespread that before these three groups there was a single (homogeneous) pre-Indo-European substratum throughout the entire territory of the Peninsula.

The considerable increase during the last thirty years in linguistic data on the ancient languages of the Balkan Peninsula, the fundamental study of both the ancient and the contemporary toponymy and anthroponymy, and particularly the decipherment in the syllabic script from Greece, as well as the marked progress in the study of the ancient languages of neighboring Asia Minor, have brought about a radical change in our views on the ethnology of the Balkan Peninsula.

On the basis of the distribution of the ancient toponymy the Balkan Peninsula can be divided into seven or eight basic ethnic regions: Daco-Mysian (Dacia and Mysia = Moesia), Thracian (Thrace), pre-Greek (Pelasgian:

southern and central Greece together with a large part of the Aegean Islands), Proto-Greek (Epirus, western and northern Thessaly), Macedonian (southern Macedonia, the basin of the Haliacmon River), Proto-Phrygian (north and central Macedonia, the basin of the Erigon River), Illyrian (Illyria and some neighboring regions), and probably also Dalmatian (Dalmatia), see Map 2.

5.1. The Daco-Mysian Region

The Daco-Mysian region included Dacia (approximately what is now Rumania and east Hungary to the east of the Tisza River), Mysia = Moesia (what is now northeast Yugoslavia and north Bulgaria), and Scythia Minor (what is now Dobrudja).

The most typical toponyms of this territory are compound words, the second part of which is the word *dava* (or *deva*, *dova*) 'town'. Due to their number and their homogenous geographic distribution, these toponyms give a clear impression about the original home of the Daco-Mysians. There are 46 (or 51) toponyms of this type: 28 (or 29), i. e., more than half of them, are found in Dacia (see section 4.3.1):

Acidava, a town on the river Alutus-Olt.

Λυγεδάρον (in an inscription from 48 B. C. from Balčik).

Arcidava (*Aggidava*, *Arcidaba*), now called Verșeț (Banat).

Buridava (Hunt papyrus from 99 A. D.) 'the town of the *Boṓgoi* tribe', a town on the river Alutus-Olt.

Iszidava, a town in NW Dacia.

Zaggidava, now called Roman.

Zigidava (Ptol., 2nd century A. D.) in western Dacia with *gi* > *zi*, cf. **Giridava* (inscription) in Lower Moesia.

Zovaidava, a town in SE Dacia.

Kagaidava, a town in E Dacia.

Kληπιδάνα, a town on the river Tyras-Dnieper.

Kopidava, *Cumidava*, now called Rîșnov.

Magrodava, cf. the Celtic place name *Marco-durum* 'horse fortress (or town)', cf. Pokorny 1951-66: 700.

Naxidava, a town in SE Dacia.

Ovidava, a town on the river Alutus-Olt.

Παριδάνα

Pelendova = *Πολόνδα(να)*, now called Craiova.

**Perburidava*, cf. the ethnicon *Perburidavenses*, a town on the river Jiul near Craiova.

Περγόδανα, a town in E Dacia.

Πυροβογιδάνα, *Piroboridava* (inscription), now called Pojana.

**Πεγιδάνα*, cf. the ethnicon *Πεγιδανίγγοι*.

**Ραμίδάνα*, a town on the river Alutus-Olt.

Rusidava, a town on the river Alutus-Olt.

Sacidaba (*Su*-?), a town S from Apulum.

Σαγιδάνα, a town on the river Alutus-Olt.

Σετιδάνα, a town in N Dacia.

Σαγιδάνα, a town W from Apulum.

Sucidava (Συζιδάβα, Ζυζίδεβα, Συζιβίδα), now called Celei.

Ταμασιδάβα, a town on the river Hierasos-Siret.

Nine (or 10) toponyms of this type appear in Lower Moesia and in Scythia Minor (Dobrudja):

Ἀεδιάβη, a town on the Danube between Augustae and Oescus.

**Buteridava*, cf. the ethnicon *Buteridavensis*.

Gildoba (= **Giridava*?).

**Giridava*, cf. the ethnicon *Giridavenses*.

Λυοῦσodava, a town in E Mysia.

Καπίdava (Καπίδαβα, *Capidava*, *Calidava*), now called Calachioi.

Μονγιδεβιά, a town in Scythia Minor = Dobrudja.

Sagadava, a town near Durostorum-Silistra.

Scaidava (Σκαδεβιά), a town in E Mysia Inferior.

Sucidava (Συζιδάβα, *Sancidapa*?), a town in E Mysia on the Danube.

Another 8 toponyms are found in east Upper Moesia (Dardania, Dacia Mediterranea):

Αἰαδάβα, now called Bela Palanka, near Niš.

Βερρεδιάβα, a town near Serdica-Sofia.

Λαυεδέβαι, a town in Dacia Mediterranea.

Desudaba (Liv. 44, 26), a town between Astibus-Štip and Pautalia-Kjustendil.

Ζισροῦδεβία (where?).

Θεσπιδάβα, between Scodra and Siparantum, i. e., on the boundary between southwest Dardania and northeast Illyria.

Ἰταδεβιά, a town in Dacia Mediterranea.

Κομπιέδava (Κομπιόδεβα), a town near Pirot.

In Thrace only one toponym of this type is found: it is *Pulpudeva* (>Bulg. *Plovdiv*), the name of a town built (or restored) at the time of king Philip II of Macedonia, who, when he conquered western Thrace (359-336 B. C.), gave the town his own name: in Greek *Φιλίππο-πολις* and in 'Thracian' *Pulpu-deva* 'the town of Philip'. This means that the only example of this toponymic type found in Thrace was (artificially) introduced there from the central part of the Balkan Peninsula (by the Macedonians) where there were other toponyms of the same type. Thus the *dava* toponyms are typical of Dacia, are more rarely found in Mysia, and are lacking in Thrace.

The Daco-Mysian word *deva* 'town' is derived from **d^hewā* 'place', cf. Bulg. *djavam*, Russ. *devat'* 'to put, to set' from **d^hewā-*, Hom. *θαάσω* 'to sit', *θάβακον* *θαῖκον* ἢ *θηόρος* (Hesych.) from **d^hew-āko-*. The difference between the forms *deva*, *dava*, *dova* is chronological (and dialectal); it is due to the phonetical development of Daco-Mysian: *ē* > *ā* > *a* (5th to 1st century B. C.) > *o* (2nd to 6th century A. D.) as in Albanian, see section 4.6.1.

The distribution of the toponyms examined allows us to make the following conclusions: the original home of the Daco-Mysian tribes was Dacia. Very early, probably during the 3rd millennium B. C., some (Daco-) Mysian tribes began to migrate to the south of the Danube into Mysia = Moesia, Dardania, east Macedonia, part of Dalmatia, Illyria, and also north Thessaly.

Some scholars consider the Dardanians to be Illyrians (Krahe, Mayer), while others are of the opinion that they were Thracians (Dečev). In my opinion the Dardanians were of (Daco-)Mysian origin with a late Illyrian superstratum (cf. the names of the kings *Longarus*, *Monunios*):³ in east Dardania there was a Thracian substratum or Thracian settlers (cf. *Δαγδά-παρρα*). The (Daco)Mysian origin of the Dardanians is confirmed, on the one hand, by the distribution of the toponyms *dava* (*deva*) 'town' (cf. *Αιαδάβα*, *Κοιμίδαβα* in north Dardania and *Θεσμίδαβα* in southwest Dardania) and, on the other, by the name of the **Αξιος* River, the upper part of which is in Dardania. This name corresponds exactly to the Daco-Mysian name of the tributary to the Danube, the **Αξιος* in Scythia Minor (contemporary Dobrudja).

From Dardania (probably during the 3rd millennium B. C.) Mysian tribes penetrated to the south along the **Αξιος* River. There they were called *Μύγδορες*; they first lived in the region between the **Αξιος* and the *Στρυμών* and later (during the classical period) lived to the east of the lower part and the estuary of the **Αξιος*, as well as in the northern part of the Chalcidice Peninsula (*Μυγδορία*). The Mysian origin of the Mygdonians is confirmed by ancient tradition, according to which they were Mysians (or Phrygians),⁴ and also by the etymology of their name: *Μύγδορες* (*Μυγδόρες*) is an ethnonym from *Μύγδων* (*Μυγδών*) and is preserved in the *Iliad* as an anthroponym: *Μύγδων* probably comes from **mūs-g^hd^hōm* or through haplology from **Mūsōm* **g^hd^hōm* 'the land of the Mysians, i. e., *Μυσία*'.⁵ This is confirmed by the following passage in St. Byz.: ... *Μυγδορία*, ἐλέγετο καὶ *Μυχθορία*. *Μυ-χθορία* is the Greek translation of *Μυ-γδορία*: Mys. *-γδων* = Gr. *χθών* 'earth, land, country'. Thus the Mygdonians were Mysians who were later assimilated by the Phrygians.

Dacian (Daco-Mysian) is the ancestor of Albanian, in which there is also an Illyrian component (see section 4.6.2).

5.2. The Thracian Region

The Thracian region or Thrace *stricto sensu* includes the eastern part of the Balkan Peninsula between the Black Sea, the Propontis, the Aegean Sea (including the islands of Thasos and Samothrace), approximately to the south of the Danube River and Scythia Minor (Dobrudja).

The most typical toponyms of Thrace are compound words, the second part of which is *para* 'brook, river (?)', *bria* 'town', and *diza* 'fortress'. Such toponyms are not found to the north of the Danube.

There are 42 (or 51) toponyms formed with *para*: *para* 'brook, river (?)' perhaps comes from **bora* (?) and corresponds to Gr. *βόρβορος* 'mud,

³ The Triballians (according to Krahe and Mayer of Illyrian origin, according to Dečev of Thracian origin) were Daco-Mysians who in the 4th century B. C. were conquered by the Illyrian tribe *Αἰταιοῖται*.

⁴ Cf. Paus. 10,27, 1, schol. Ap. Rh. 2, 786.

⁵ Cf. Gr. *Πεσραιβών χθών* (Aesch.) = *Πεσραιβία*, **Υάμπολις* from **Υαντ(ων)-πολις* 'the town (of the tribe) **Υαντες*', *χθών Πελασγών* (Aesch.), *χθών Θρηϊκία* (Eur.).

marsh', Skt. *barbura-m* 'water', *Barbarā*, *Barbarī*, river names, Bret. *béra* 'to flow', Bulg. *bara* 'rivulet, bog'.⁶

Agatapara, now called *Agatovo*, near the town of Sevlievo.

Αθναρα, probably with dissimilation from **Αθου-παρα* 'rapid river', see **Αθους*.

Αθναράρον, a settlement in Haemimont.

Βαζο-παρα (in an inscription from Pizos, near Čirpan).

Βενδιπαρα 'the river (?) of the goddess *Βένδης*'.

Βέπαρα, a settlement near Pulpudeva-Plovdiv.

Bessapara, now called Bešikara.

Bessapara, another settlement with the same name.

Βηλαδελπαρα, a settlement on the river Hebros-Marica.

Βηρίπαρα, now called *Berievo*, *Berovo*, near the town of Sevlievo.

Βόοπαρα, a settlement near Bessapara.

Βονοιπαρα (in an inscription from Pizos, near Čirpan).

Breierophara, a town in Greek Thrace.

Βρίπαρο, a settlement near Remisiana, now called Bela Palanka.

Βρίπαρον, a settlement near Serdica-Sofia.

**Βναιπαρα* in the ethnicon *Βναιπαρηνη*.

Γελονπαρα (in an inscription from Pizos, near Čirpan).

Λαοδάπαρα, a settlement near Bela Palanka.

Λαοδάπαρα: *Λαοδα-* is a Thracian as well as a Daco-Mysian word, cf. the Thracian anthroponym *Dardisa* from *Anhialo*.

Λουοσίπαρα (Ptol. 3, 11, 7; 2nd century A. D.), now Mesini near Karışiran on the river Erkene in Turkish Thrace.

Λωδοπαρο(ς).

**Ethrupara* (?) > *Jatropolü* (1642 A. D.), now called Etropole (?).

Ζάπαρα, now called Sandanski.

**Capara*, now called *Caparevo*, near the town of Sandanski.

Inipara

**Ιογίπερα*, cf. *Λουοσί-παρα* = *Λοιζί-περα*.

Κειριπαρα > *Ciropol*.

Κηριάρον, a settlement in Haemimont.

Κρασάλοπαρα (in an inscription from Pizos, near Čirpan).

Longinopara = *Λόγγινος ποταμός*, now called *Lăžene*; this name makes it possible to define the meaning of *para* as = *ποταμός* 'River'.

Μοντζίπαρα, a settlement in Dacia Ripensis.

Ποιοκούπερα, cf. *Λουοσί-παρα* = *Λοιζί-περα*.

**Sapara*, now called *Sapar-evo*(?), near the town of Stanke-Dimitrov.

Sauzupara, a settlement between Arso and Burdipta.

Σκαπτοπαρα (in the ethnicon *Σκαπτοπαρηνος*).

Σκαριπαρα, a settlement W from Vidin.

Σκασκοπαρα (in the ethnicon *Σκασκοπαρηνος*).

Σπνοπαρα (in an inscription from Konjovo near Kjustendil).

Στρατοπαρα (in an inscription from Pizos, near Čirpan).

Ταμονβαρί(?): -*νπ*- > -*νβ*- : -*βῶρι*, the diminutive of *παρα* (?).

Ταρτωρον < **Ταρτω-παρον* (?).

Τόπαρον, a settlement in the Rhodope mountain.

⁶ But a connection with Bulg., Serbocroat. *poroj*, Rum. *pirtu* 'brook' (Dac.), Alb. *përrua* 'brook, torrent' is not excluded.

Tranupara, a town in *Paeonia* between Stobi and Astibus.

**Υμανπάρον-βρι*: -βρι, the diminutive of *βρι*.

Χεσοόπαρα, a settlement near Niš.

There are 14 (or 17) toponyms formed with *bria* 'town'; *βρία* 'town' is derived from **wri(y)ā*, cf. Toch. B *rije*, A *ri* 'town', Av. *var* 'castle, fortress, tower':

Αλααβριη in the epithet (ethnicon) *Αλααβριηνος*.

Βολβαβριη in the ethnicon *Βολβαβριηνος*.

Βριέ (= -βρι?).

Βριέα (-ια > -α), a town on the Aegean coast.

Καλοβριη.

Κώμβρια, *Κωβρία* (attested since Herodotus, 5th century B. C.), a town on the Aegean coast.

Μακιοβριη [?].

Μεσαμβριη, *Μεσημβρία*, *Μεταμβρια*- (attested since Herodotus), now Bulg. Nesebăr.

Μεσημβρία, *Μεσαμβριη*, *Μεσαμβρια* (attested since Herodotus), a town on the Aegean coast.

Ποικυμβρία, a town on the Aegean coast.

**Σαλαμβρία* (?), cf. *Σαλαμβρίας*, a river in N Thessaly.

Σηλυμβριη, *Σηλυ(μ)βρία*, *Σαλυ(μ)βρία* (attested since Herodotus), a town on the coast of Propontis in SE Thracia.

Σκελαβριη (in an Inscription from Plzos, near Čirpan).

Σομβρία (inscription from the 5th century B. C.), a town on the coast of Propontis.

**Υμανπάρονβρι* (-βρι, the diminutive of *βρι*).

There are 11 toponyms formed with *diza* (-os); *diza* 'fortress' is derived from **d^h(e)igh(y)o-* (or -*ā*), cf. OPers. *didā*, Mod. Pers. *diz*, *dez* 'fortress', Arm. *dizanim* 'to pile':

Bedizos, mutatio between Resisto and Aprī(s).

(*Beodizos*, probably identical with the preceding).

Burtudizos, now called *Babaeski*.

Δελζας, a settlement in Haemimont.

Δραδιζα in the ethnicon *Δραδιζανος*.

Κιοιλιζος, a settlement in Mysia Interior.

Orudiza, -*disza*, mansio on the river Tonzos-Tundža.

Ostudizo, now called Hafsa.

Tarpodizos, probably near Perinthos.

Τυρόδιζα (attested since Herodotus), a town on the coast of Propontis.

Τυρόδιζα, a settlement on the Aegean coast, now called Makri.

The principal peoples⁷ in the eastern part of the Balkan Peninsula were Thracians, Mysians, and Dacians. These peoples were divided into many tribes. Thus the main Thracian tribes were the Bessians, the Ciconians, the Odrysians, the Bithynians, etc.; the main Mysian tribes were the Dardanians, the Triballians, and the Mygdonians; the Dacians consisted of Dacians and Getans.

Thracia included the southeastern part of the Balkan Peninsula between the Black Sea, the Propontis, the Aegean Sea, the Danube (or the Haemus-

⁷ Before the invasion of the Iranians and the Celts.

Balkan Mountains), and the Strymon River. The most characteristic and numerous place names in Thrace are the compounds formed by the words *para* 'brook, river (?)' (*Bendipara*, *Bessapara*, *Keiripara* etc.), *bria* 'town' (*Kō(m)br(e)ia*, *Mesēmbria*, *Sombria*, etc.), and *diza* 'fortress' (*Beodizos*, *Orudiza*, *Tyrodiza*, etc.).

In this region there are no reliable data on a more ancient onomastic layer than the Thracian layer. This means that the ancient Thracians had lived in this territory at least since the Early Neolithic Period. Thus the most ancient cultural layers of such settlements as Karanovo, Azmaška Mogila, Kazanlāk, etc., are Proto-Thracian. Furthermore different peoples and tribes invaded Thrace during this long period. Thus Mysians and Dardanians lived in northwest Asia Minor as early as the 2nd millennium B. C. In order to reach Asia Minor the Mysians and Dardanians had to pass through Thrace. Hence in Thrace there were Mysian and Dardanian invasions. Moreover, during the second half of the 2nd millennium B. C. the Phrygians invaded Asia Minor and passed through Thrace.

In Thrace there are toponyms of Daco-Mysian (for instance, *Salmydēssos*), Phrygian, Greek (as for instance *Neapolis*, *Nicopolis*), Macedonian, Celtic, and Latin (as for instance *Aquae Calidae*, *Traiana Augusta*) origin. But the most ancient onomastic layer is Thracian: no other onomastic layer is known to exist — not even single toponyms — which is more ancient than the Thracian toponymy.

At the time when the pre-Indo-European theory dominated, Thracian toponyms such as *Perinthos* and *Salmydēssos* were declared to be pre-Indo-European. This view was based on the assumption that the suffixes *nth* and *s(s)* were of pre-Indo-European origin. This was a grave mistake. What is valid for Greek toponymy cannot be valid for the Thracian place names because these two languages have different phonetic laws: the disappearance of intervocalic *s* is a Greek phonetic phenomenon but is not Thracian; the consonant shift *t > th* is a Thracian phonetic phenomenon but is not Greek.

Thus from the point of view of the phonetic laws (*n > in*, *t > th* and intervocalic *s* preserved) these two toponyms have a clear etymology:

Περίνθος, *Περίνθος*, a town situated on a hill on the coast of the Propontis, is derived from IE **perwnto-* and corresponds exactly to Skt. *pārṇata-* 'mountain' from IE **perwnto-*. This name is of Thracian origin.

Σαλμυδηνός, a gulf, river, and place in Thrace on the Black Sea, is derived from IE **salm-udes-(yo-)* 'salty water', cf. Gr. *ἅλμη* 'sea water, salty water' from **salmā* and *ῥδος* n. 'water'. The preserved *d* shows that this name is of Mysian origin.

Thus the conclusion can be drawn that the Thracians had lived in the territory which is named after them since the times when the tribes in this region began to carry on a settled way of life, i. e., since at least the Early Neolithic Period. Before this time the population was very scarce and carried on a nomadic way of life. Furthermore, even if we accept the assumption — though it cannot be proved — that a pre-Thracian population did live in Thrace during the Palaeolithic Period, this population did not leave any traces.

Therefore, despite the fact that Thracian was influenced in different ways by the languages of different conquerors, it was preserved by the autochthonous population until the end of antiquity.

Mysia (L. *Moesia* is a later form) is contemporary north Bulgaria and northeast Yugoslavia. The Dardanians were a Mysian tribe with a late Illyrian superstratum. At an early period (probably during the 3rd and 2nd millennium B. C.) Mysians and Dardanians penetrated into Asia Minor.

According to the toponymy in Dacia and Mysia, the tribes and peoples who lived there spoke dialects which were closely related. The Daco-Mysian region included Dacia (approximately contemporary Rumania and Hungary to the east of the Tisza River), Mysia = Moesia and Scythia Minor (contemporary Dobrudja). The most typical place names in this region are the compounds whose second part is the word *dava* (or *deva*, *dova*) 'town' (cf. *Acidava*, *Capidava*, *Sagadava*, etc.). The principal populations in this region were the Dacians, the Getans, the Mysians, the Dardanians, the Triballians, etc., and these were the tribes or peoples who developed the various neolithic, chalcolithic, and Bronze Age cultures in this region, as, for instance, the cultures of Starčevo, Vinča, Sălcuța, Gumelnița, etc.

The Dacians lived in the territory of contemporary Rumania. The Getans were closely related to the Dacians.

Thracians, Mysians, and Dacians spoke languages of IE origin. Dacians and Mysians spoke two dialects of one and the same language which can be called Daco-Mysian. The toponymy shows that Thracian differed quite considerably from Daco-Mysian. Thracian, Dacian, Mysian, Phrygian, Macedonian, and Illyrian probably formed a linguistic union (like the contemporary Balkan linguistic union) which was under the strong influence of Greek.

Daco-Mysian tribes began to migrate quite early and settled in (northeastern) Illyria, east Dalmatia, and east Pannonia.

5.3. The Pre-Greek (Pelasgian) Region

The ancient toponymy of Greece allows us to map out two large ethnic regions: one is pre-Greek (or Pelasgian) and the other is Proto-Greek.

The pre-Greek or Pelasgian region included the Peloponnesus and central Greece (including the larger part of the Aegean islands); it lays approximately to the south of the line formed by the Acheloos, Pamissos, and Peneus Rivers (or from the gulf of Ambracia to the mouth of the Peneus River in northeastern Thessaly).

This region is characterized by toponyms (hydronyms and oronyms) which are formed with the suffixes *-rî-* and *-σ(σ)-*, as well as by toponyms of the following type:

**Αχελῷος*, the name of five rivers in Aetolia, Ainis, Achaia, Arcadia, and on the island of Mykonos, corresponds to the Phrygian river names **Αχέλῃς*, **Αχέλης*, cf. Phryg. *αχάλη* 'water', L. *Aquilo* (Apulia), Venetic **Ακυλῆς* (northeast Italy), Lith. *Akėlė*, etc., all of which are related to L. *aqua* 'water' (see section 11.4.3.1).

**Εραιοῖος*, the name of five rivers in Attica, Eretria, Argolis (two rivers), and Arcadia. This name corresponds to the name of the Dacian **Ιέρασος* River from **eraso-s*, cf. Gr. *ἄπ-εράω* 'to vomit, digorge, carry off'.

**Ιταχός*, the name of four rivers in Aetolia, Boeotia, southern Thessaly (Ainis), and Argos (Peloponnesus), from **isn-akwā* 'quick water' (see section 11.4.3.1).

Κηφῖος(ος), Dor. *Καφῖος*, the name of nine rivers and springs in Phocis (two rivers), Attica, the island of Scyros, Eleusis, Salamis, Sicyon, Argolis, and near Epidaurus (north-eastern Peloponnesus); *Κηφισιά*, a spring in Attica. This name is derived from **kāph-īs(y)o-* or **kāph-ent-yə* and corresponds to the OBG *kapati*, *kapljō* 'to drop' from **kāph-yō*, OBG *kapeštī* > Mod. Bulg. *kapešt* from **kap^h-ent-yo-*, Skt. *kap^ha-hi* m. 'mucous, moisture', Av. *kafō* 'scum' from **kap^h-*; cf. the names of rivers and springs in Bulgaria: *Kapeštec* from **kāp^h(h)-ent-y(o)-*, *Kapišec* from **kap^h(h)isyo-*, *Kapna* from **kāp^h(h)-inā*, *Kapot*, *Kap-ouac*, *Kapla* from **kāp^h(h)-ilā*, etc.

Λάρις(α), the name of eight towns in Thessaly, Phthiotis, Attica, Argos, and the island of Crete; cf. also *Λάρις(α)ος*, the name of a river in Achaia and *Λαριαῖται πέτραι*, rocks on the island of Lesbos; from **lāwar-īs(y)ō-*, a derivative of **lāwar-* 'stone', cf. Gr. *lāas* 'stone', *λαῖρον* μέταλλον ἀργύρον παρὰ Ἀθηναίους (Hesych.).

Κύνθος 'mountain' is found in the names of six mountains and two islands: *Κύνθος*, a mountain on the island of Delos, *Ἀρά-κύνθος*, a mountain in southern Aetolia, Boeotia, and Attica, *Βερέ-κύνθος*, a mountain on the island of Crete, *Ζά-κύνθος*, an island in the Ionian Sea and the older name of the island of Paros, *Ῥήο-κύνθος*, a mountain in southern Thrace. The word *κύνθος* corresponds to Skt. *kūṭa* 'summit, peak, highest point' from **k^hh-to-*, cf. Skt. *Tri-kūṭa-*, *Gṛdhra-kūṭa-*, names of mountains: *lt* > *rt*; cf. Gr. *Φιλιῶς* > *Φω-τίας*, etc.

There are other toponyms which reflect the same non-Greek phonetic peculiarities and which belong to the same pre-Greek layer:

Αἰδηψός, a town in Euboea where there are hot springs, from **aydh-āpsō-s*, cf. Gr. *αἶθω* 'to burn' and Skt. *āp-* 'water', OPruss. *ape* 'river'.

Ἀτυκός, *Ἀρτικός* (*kt* > *tth*, *tt*) = Gr. *ἀτυκός*, a derivative of *ἀκτή* 'headland, promontory'; cf. St. Byz.: *Ἀκτὴ, οὕτως ἡ Ἀτυκὴ ἐκαλεῖτο*.

Ἀτθίς from **ak-tt-s*, cf. Gr. *ἀκτὴ* 'headland, promontory'.

Θήβαι, *Θήβη* (*t* > *th* or *st* > *th* and *bh* > *b*) from *(*s*)*tēbhā*, cf. OPruss. *stabis* 'stone' from **stābh-i-s*, Lyd. (Car.) *τάβα πέτρα*, Osc. *Tifata*, the name of a mountain and of a town, from *(*s*)*tēbhā-tā*.

Σάλμος (Boeotia), *Σαλιώνη* (Ellis, Crete), *Σαλαμίς* (an island near Attica) from **salm-*, cf. Gr. *ἄλμη* 'sea water, salty water'.

This ethnic layer is recorded throughout the entire pre-Greek (or Pelasgian) region, including the island of Crete and most of the Aegean islands.⁸

This region is considered to be Pelasgian on the basis of data from the ancient authors who say that before the Greeks it was populated by the Pelasgians. This is recorded especially for the Peloponnesus, Attica, Thessaly (to the north including *Λαρίσσα Πελασγιώτις*), the islands of Crete, Andros, Lesbos, Lemnos, Imbros, Samothrace, etc.⁹

⁸ Some scholars are of the opinion that there was a Libyan or Egypto-Libyan (African) component on the island of Crete and in Greece, cf. Schachermeyr 1954: 1475-1476, 1481. From a linguistic point of view this assumption is not tenable: the ancient toponymy of Libya and Egypt are basically different.

⁹ According to the data given by the ancient authors (from Homer to Thucydides, i. e., until the end of the 5th century B. C.) on the Pelasgians. Later data about the most ancient population of the Greek territory cannot be considered reliable. *Κρησιών*, *Σκυλάκη*, *Πλακία*, etc., were probably (late) Pelasgian colonies from the period of the Greek invasion in Greece when the older settlers had already been driven away. Dodona, the town in Epirus which is famous for its temple of Zeus, is defined as being Pelasgian on the basis of the following passage in the *Iliad* (XVI, 233): Ζεῦ ἄνα, Δωδωναίε Πελασγικέ (or Πελα-

5.4. The Proto-Greek Region

The Proto-Greek region included Epirus, approximately up to *Αἰλῶν* in the north including Paravaia, Tymphaia, Athamania, Dolopia, Amphiloikia, and Acarnania), west and north Thessaly (Hestiaiotes, Perrhaibia, Tripolis, and Pieria), i. e., more or less the territory of contemporary northwestern Greece). The ancient Greek character of this region is confirmed by the following facts:

- (1) Typically pre-Greek toponyms¹⁰ are lacking.
- (2) All the geographical names are of archaic Greek origin.

5.4.1. Epirus

5.4.1.1. Regions and Tribes (from North to South)

Ἡπειρος = *ἡπειρος* 'land, continent'.

Ἐγγεῖη, the name of a tribe, *Ἐγγεῖς* or *Ἐγγέλεις* (*Ἐγγέλεις*) = Att. *ἐγγέλεις*, Hom. *ἐγγέλεις* pl. from *ἐγγέλεις* 'eel', a totem name.

Ἀργυροῖνοι, a derivative from the toponym *Ἀργυρος* = *ἄργυρος* 'silver', cf. *Ἀργουρα* (Boeotia, Thessaly), *Ἀργυρᾶ* (Achaia). For its formation cf. Gr. *χυτρο-ῖνος* from *χύτρος*.

Χαονία, *Χίονες*, which is derived from *Χάων* < **χαF-ών* 'place with abysses', cf. *Χάων ὄρος* in Argolis, *χάος* n. 'chaos, spaces, gaping hole, abyss', *χάσσω* 'to gape', *χάσμα*, *χάνος* n. 'gaping hole'.

Ἀτινῆες (Thuc.), *Ἀτινῆνοι* (Lyc.), *Ἀτινῆνοι* (St. Byz.) from *ἀ-* < IE **ad* 'near, at' and (Dor.) *-ωνι-* with assimilation from **kwindo-* > (Aeol.) *Πινδος*, cf. *Ἀκαρνανες* and Ion. *Τινδο*.

Ἀμόμονες (*Ἀμύμονες*), a people in Epirus, pl. from *ἀμόμων* 'blameless, noble, excellent'.

Παραναία, *Παραναῖοι* 'living near (παρά) the *Ἀ(F)ῶρος* River'.

Παρωραία, *Παρωραῖοι* *παρά* (τιῷ) ὄρει = Dor. ὄρει'.

Καμμανία, *Καμμανοί*, a derivative from **κάμμα* < **(σ)κάπ-μα* from *σκάπ-τω* 'to dig', cf. (ο)κάπενος 'trench'; cf. *κόμ-μα* from *κόπ-τω*. The same region was later called

Κεορία, *Κεοτιο-ῖνη*, a derivative from **kes-tr-* or **kes-tēr*, cf. Hom. *κέλω*, *κείζω* 'to split'. The second name probably is a translation of *Καμμανία*.

Ἐλλοπία (*Ἐλλοπῖνη*), a derivative from the tribal name *Ἐλλοπιες* pl. from *ἐλ(λ)-οψ* 'a salt-water fish; sturgeon', cf. *εἰλέω* (**Fελ-νέω*) 'to wind, turn round', cf. the tribal name *Ἐγγεῖς* 'eels'.

Τριφυλία *ἀπὸ τοῦ τρία φύλα συνελθύνενοι*.

σικέ). But this cannot be considered to be reliable evidence for the fact that an ancient Pelasgian population lived in Epirus. Only a temple (and a sanctuary) were founded by Pelasgians: Herodotus (II, 52) expressly says that the Greeks had borrowed elements of their religion from the Pelasgians. Lochner-Hüttenbach's (1960) assumption that the Pelasgians were of Illyrian extraction is not convincing.

¹⁰ See the maps of the distribution of the toponyms formed by the suffixes *-ωνι-* and *-ο(σ)-* in Schachermeyr 1954: 1501; 1955: 246, 247. The only name of this type mentioned in these maps of north Greece (north of the line formed by the Acheloos and Peneus Rivers) is the anthroponym *Sabylinthos* (*Salynthos*), of Thracian origin, see below; *Phayntos* in northwestern Thessaly is an error instead of *Φαισιός*; for *Agassa* and *Τύρσιος* see below.

Θεσπρωτία, the tribal name Θεσπρωτοί, and the anthroponym Θεσπρωτός are archaic compound words: Θεσπρωτός corresponds to Θεόπρωτος, cf. θέσ-φατος, θέσ-κειος, θέσ-(σ)πις, θέσ-(σ)πίσιος.

Κασσωπία, the tribal name Κασσ-ωποί, the toponyms Κασσ-ώπη, Κάσσο-πιες, Κασσ-ωπάς, and the name of a spring, Κασσ-ωπίς, correspond to the toponyms and anthroponyms Κασσι-όπα, Κασσι-όπη, cf. Κάσσο-ανδρα from *kad-ti-, which is preserved in κε-καδ-μένος (Pind.) = κε-κασ-μένος (Hom., Aesch.), κέκασμαι 'to excel': Κασσ- is derived from *κασσι-, while κασσι- is a contamination of Κασσ- + Κασσι-; Κάσσο-ωπιες, -ωποί, Κασσι-όπη have the approximate meaning of 'with bright (light) eyes'.

Μολοσσία, Μολοτία, a derivative of the tribal name Μολοσσοί, and the personal name Μολοσσός, Μολοτι(ς)ός = Lith. *mūlkis* 'imbecile, foolish' from *m̥l̥hk-yo-s: -ολο- is an Aeolism, cf. Att. μαλακός 'soft'.

Ὀρεστία (-εία), a tribal name Ὀρεσται (Molossis) from *δρεσ-τάς, *δρεσ-τός, cf. δρεΐτης from *δρε[σ]-ίτης, δρέσ-τερος, δρεσ-τιάς f. 'mountainous, living in the mountains'.

Ἀθαμανία (-ντία), a tribal name Ἀθαμᾶνες, and the anthroponym Ἀθάμας, -αντος ('rare, uncommon') are related to θαμῖ 'often', θαμῆες 'crowded', Θαμν-κλῆς, θαμιζω 'it comes often'.

Περραιβοί (Myc. *pera₂qo*) from *Περι-αγ-Φοι,¹¹ cf. κατ-αγ-ίζω 'to rush down', αἶγες 'big waves', Skt. *ejati* 'stirs, moves'; cf. Thess. πέροροχος = Att. περι-οχος, Aeol. κέρρον = Att. κύριον.

Αἰθυκία, a derivative from the tribal name Αἰθυκίες 'ardent, flaming', cf. the proper names Αἰθων = αἰθων 'burning; fiery, hot', Αἶθος = αἰθός 'burnt, shining', αἶθος 'fire', Αἰθίων, Αἰθί-ον, αἶθω 'to burn'.

Ἀμβρακία and Ἀμβρακος from ἀν(ὰ) *Φράκκι, cf. Aeol. βράκος = Att. ῥάκος n. 'ragged, tattered (garment)'.

Ἀμφιλοχία, the tribal name Ἀμφίλοχοι, the anthroponym Ἀμφίλοχος, cf. λόχος 'am bush'.

Δολοπία, the tribal name Δόλοπιες, the anthroponym Δόλο-ον, cf. δόλος 'trick, cunning treachery'.

Αρνοπία, the tribal name Αρνόπιες, the anthroponym Αρνό-ον, cf. Boisacq 1923: 722. 723; cf. δρύον 'wood-pecker', a totem name.

Ἀκαρνανία, the tribal name Ἀκαρναῖνες from *a-* < IE *ad 'at' and Κάρονος, an island near Acarnania; Κάρονος from IE *k̑rno-s = Slovenian *k̑rn* f. 'peak, rock'.

5.4.1.2. Rivers

Πηλώδης (λιμήν) = πηλώδης 'muddy, marshy'.

Παλόσις, a derivative of Dor. πάλός, Att. πηλός 'clay, mud'.

Πολυνάνθης, a river in Chaonia = πολυνάνθης 'blooming'.

Θύαμις, a river and a cape at the rivers mouth, cf. θύω 'to rage, seethe'; Θύαμις from *θνα-μα or *θνα-μός, cf. θνάω.

Παμβώτις λιμήν, cf. παμ-βώτις 'all-nourishing', an epithet of Γῆ.

Κοκυντός = κοκυντός 'shrieking, wailing'.

Ἀχέρον, cf. Lith. *āžeras*, OPruss. *assaran*, Russ. *ozero* 'lake' from *aghero-.

Ὠρωπός, Dor. ὠρος (Att. ὄρος) 'mountain' + -απος 'river, water' (oa > ω), cf. Ἄν-απος 'without water' (or cf. ὀπός 'juice of a plant': oo > Dor. ω; or cf. εὐρωπός 'wide', στεν-ωπός 'narrow').

¹¹ Transformation from *peri-ayg-u-, *nomen agentis* in u; cf. Georgiev 1960c: 17-18.

"Αραχθος, dial. "Αραιδος, "Αραθθος, "Αραιδος from *ἀρακ-ο-τός, cf. ἄραξις 'dashing, beating', ἀράσσω 'to smite, dash' (or Pelasgian, see Georgiev 1958b: 8).

Κάδμος and the anthroponym Κάδμος 'shining', cf. κέ-κασο-μαι 'to excel', part. κεκαδμέ-ρος 'excellent'.

5.4.1.3. Mountains

Κεραύνια ὄρη from κεραυνός 'thunderbolt'.

Βοϊόν (τὸ ὄρος) = -βουος, later βόειος 'oxen'. Pokorny's supposition (1951-69:117) from *bhey- is not convincing.

Λύγκος (place name Λυγκαίη), a retroformation from the adjective λύγκιος and from the ethnicon Λυγκαίης, cf. λύγξ, λυγκός 'lynx'.

Λακμός, Λάκμος, Λακμών, Λάκμων from *λάκ-μα or *λακ-μός, cf. λακίς 'rent, gap', λακίζω 'to tear', ἀπ-έλληκα ἀπέσπρωγα, Κέπριοι (Hesych.), λάκη βράχη, Κοῆτες (Hesych.); on the formation cf. ἀγ-μός 'fracture; broken cliff' from ἀγ-ννμι 'to break', ῥηγ-μός, ῥηγ-μα 'breakage, fracture' from ῥηγννμι 'to break, to tear', and the toponyms Πωγμοί, Πώγη, etc.

Τήμωρος (Τμήρος, Τομοῦρον),¹² a mountain near Dodona in Epirus and another mountain near the Apsos River (now called *Tomor*) from *tomhs-ro-s or *tṃhs-ro-s (with Aeol. -ομ-) 'dark' = Skt. *tamisra-m* 'darkness', Lith. *tiñšras* 'dark-red' (from *tṃhs-ro-s), L. *tenebrae* 'darkness'.

"Ολυμπος = *ὀ-λυμτός (*clump-) 'breaking, gorge', cf. Skt. *lumpati* 'to break'; cf. L. *rup-ex* 'rock', *rūpina* 'rock', *rūpēs* 'rock' and *rumpo* 'to break'; cf. Brandenstein 1954: 628-629.

Πνδος (and the name of a river in Locris) from *kwindo-s 'white', cf. Skt. *śvindate* 'to sparkle', cf. Pokorny 1951-69: 628-629.

Χεμέριον (a mountain, cape, and haven) from χεμέριος 'stormy, wintry'.

Crania (Pliny), a mountain in Epirus, see Κράνεια.

Ίδομένη, a hill near Ambracia, from ἰδομένος, a participle of εἶδομαι 'to see, to watch to show oneself'.

5.4.1.4. Settlements and Localities

"Ωρικος (-όν, -ός), the ethnicon "Ωρικοι (-οί), a derivative from Dor. ὦρος, Att. ὄρος 'mountain'.

Ἐκατόμ-πεδον, cf. ἐκατόμ-πεδος 'a hundred feet long'.

Ὀμφάλιον from ὀμφαλός 'navel'.

Χίμαιρα = χίμαιρα 'she-goat'.

Ἀντιγόρεια, a town in Epirus, from Ἀντί-γονος, a personal name.

Φανότη, cf. φανότης, -ητος 'clearness, brightness'.

Ὀγ-χεομός (Aeol. = Att. Ὀγ-χεομός), cf. ἀνα-χέω 'to pour out; to be spread', ἀνα-χοή 'eruption', ἀνα-χώνννμι 'to heap up into a mound'.

Φοινίκη, a town in Epirus, cf. φοῖνιξ, φοίνιξ 'purple, crimson', Hom. φοινός 'blood-red', φοίνιος 'blood-red, bloody' from φόνος 'murder'.

Gitanae (Livy), a town in Epirus, from *γειτανια > γείτανα f. of γείτων 'neighbor'.

Elaeon (Pliny), a valley in Epirus, = ἐλαιών 'olive orchard', Ἐλαιός, a town in Epirus, from ἐλαία 'olive tree'.

¹² This name is considered to be Illyrian, cf. Krahe 1955: 98, Mayer 1957-59:1:341, but this explanation is improbable since IE *sr* shifted into Illyr. *str*. The form Τομ-οῦρον is under the influence of Hom. ὄρος 'mountain'. Cf. also Τμήριον ὄρος Ἀρκαδίας (Hesych.).

Βου-θροτός (-ον, *Βούθρωτος*), a compound word composed of *βοῦς* 'bull, ox, cow' and *θρόω-σσω* 'to rush, to leap'.¹³ Cf. the toponym *Βού-νευμα*.

Βού-νευμα (-νευμα) from **νεμ-ια*, cf. *Βού-ρομος* 'grazed by cattle'.

Ἰλιον (*Ilíum*) from **ιλF-ιο-*, a derivative of *ἰλῦς* 'mud, slime'.

Ἐὐθροια = *εὖ-θροια* 'good flow, free passage'.

Ἑλλά: *Διὸς ἱερὸν ἐν Δωδώνῃ* (Hesych.) from **sed-lā* = Lac. *ἑλλά καθέδρα* (Hesych), L. *sella* 'easy chair', Gall. *sedlon* 'chair, seat.' Cf. *Ἑλλοί* (from **sedlyo-*) *Ἑλλήνες* *οἱ ἐν Δωδώνῃ καὶ ἱεροῖς*. The name *Ἑλλήνες* is also a derivative of *Ἑλλά*. *Ἑλλοί* was preserved (by the Illyrians or the Pelasgians) in its most ancient form, *Σελλοί*.

Τέκμων = Av. *čašman* 'eye' (> 'spring') from **kweks-men*, cf. Gr. *τέμμαρ*, Hom. *τέκμωρ* n. 'boundary, goal, end'.

Πασσαρών (-ώνος), cf. *πασσάριος* *σταυρός* (Hesych.). The name is not Illyrian, as is noted by Krahe 1955: 106.

Φωτική, which is derived from *φώς*, *φωτός* 'man' or from *φῶς*, *φωτός* 'light'.

Χαλκίς, a derivative of *χαλκός* 'copper'.

Αἰγίνιον, a derivative of *αἶγ-ινος* 'goats', adj. from *αἶξ*, *αἶγός* 'goat'.

Τοῦρνη (-ώνη) = *τοῦρνη* 'stirring instrument, ladle'.

Ἐλαία, a port in Thesprotia, = *ἐλαία* 'olive-tree'.

Ὀλπαι, *Ὀλπη* = *ὄλπη* 'a kind of small vase'.

Φυλάκη = *φυλακή* 'watching, guarding'.

Ἐφύρα (*Ἐφυρα*) from *ἐπ(ι)* **ύρα* 'on the water (marsh)', cf. the name of the *Υρὴ* Lake in Aetolia (later *Υδρα*), Lith. *jūres* 'sea', OPruss. *wurs* 'lake, bog'. The etymology of *Ἐφύρα* is based on the fact that the Thessalian town of *Ἐφύρα* was later called *Κορώνων*, a derivative of Thess. *κοράνα*, Att. *κορήνη* 'spring'.

Κοράνεια, a derivative of *κοράνος* f. 'cornel tree'.

Βουχέτις (*Βούχεττα*, *Βουχέτιον*) = *βοῦς* 'bull, ox, cow' + *ὄχετός* 'channel, stream'.

Ἑλάτρουα (-ια), a derivative of *ἐλατήρ*, -ῆρος 'one who drives, driver of (horses, oxen)'.

Χαράδρα, *Χάραδρος* = *χαράδρα*, *χάραδρος* 'mountain-stream, torrent'.

Ἄργος (*Ἀμφιλοχιόν*), see below.

Argitheia (Livy), a town in Athamania, cf. *ἀργι-κέραννος*, *ἀργι-όδους*, *Ἄργι-λαος*, etc.

Ἀλμῆρη ἢ *Ἀλμίνη* (Ptol.), a region in Epirus, from *ἄλμα* 'tree', cf. Fick 1896-97: 39.

Βατίαι, a town in Epirus, from *βάτος* 'bramble; raspberry'.

Γ'λυκὺς λιμὴν, a port in Epirus.

Δεξαμεναί, a district in Ambracia, pl. from *δεξαμενὴ* 'reservoir, cistern'.

Δοῦς, a town in Epirus, = *δοῦς* 'oak'.

Ἐδρυμεναί, a town in Epirus, from **Fερν-μενος* 'protected' from (*F*)*ἐρύω* 'to protect, guard' with *Εδ-* after *εὔρος*.

Theion, a town in Athamania, = *θεῖον* 'sulphuric fumes, sulphur'.

Θρόνον, a place in Thesprotis, from *θρόνος* 'a raised seat, throne; seat'.

Κόμαρος, a port in Epirus, = *κόμαρος* 'strawberry clump'.

Κώμη, a place in Epirus, = *κώμη* 'village'.

Tetraphylia, a place in Epirus (Athamania), a derivative from *τετραφύλος* 'consisting of four tribes'.

Χαμαιγίφρουαι, a place in Epirus, cf. *χαμαί* 'on the earth' and *γίφρουα* 'dyke, dam, bridge', *χαμαί-δους*, *χαμαί-μηλον*, *χαμαί-πιτυς*, etc.

Theudoria (Livy), a town in Athamania, derived from *Θεόδωρος* > dial. *Θευ-*.

¹³ Contrary to the opinion of Mayer (1957-59: 1,103) this name can be neither Illyrian nor pre-Greek.

Κόρκυρα (later *Κέρκυρα*), an island near Epirus, Myc. *korokurajo* = ? *Κροκυραῖοι* from **krok-uro-s* or **kṛk-uro-s*, cf. *κρόκη* 'thread', *κροκύλη*, *κροκύλεια*.

Φάλακρον, a cape in Corcyra, n. of *φαλακρός* 'bald'.

Ἰσιώνη, a mountain on the island of Corcyra, cf. *ισιός* 'mast of a ship, weaving loom', *ισιόν* 'weaving workshop'.

Λευκίμμη, a cape in Corcyra, cf. *λευκός* 'white'.

Ἐρικοῦσα, an island near Corcyra, from *ἐρ(ε)ίκη* 'heather' (a kind of plant).

Πωιδέσσα, an island near Corcyra, from *πρῖνος* 'holm oak, kermes-oak'.

Πτυχία, an island near Corcyra, f. of *πτύξ* 'folded', cf. *πτυχός* 'fold', *πολύ-πτυχος* 'with many folds'.

Σέβοια pl., small islands near Corcyra, cf. *ov-βόσιον* 'a herd of swine' (*σῆς* and *βόσκω*).

Trachia, an island near Corcyra, f. of *τραχὺς* 'jagged; shaggy; harsh'.

Πῆζος, *Πηζοί*, islands near Corcyra, from **πᾱκτι-λο-*, a derivative from Dor. *πᾱκτός* = Att. *πηκτός* 'fixed; planted'.

Malthaca (Pliny), an island near Corcyra, f. of *μαλθακός* 'soft; mild'.

Ὀθωροί, islands near Corcyra, cf. *ὀθόρρα* f., *ὀθόρ(ν)ιον* 'chelidonium malus' (a plant).

Othronos, an island near Corcyra (Pliny), instead of *Othonos* = *Ὀθωνοί*, confused with *Ὀθρωνός*, an island near Sicily.

5.4.2. Western and Northern Thessaly and Pieria

Pieria was part of the Proto-Greek region because toponyms with *φ*, *θ*, *χ* (from MA) are found there, cf. *Βαφύρας*, *Μεθώνη*, *Αἰβήθρα*, *Λεβήθριον ὄρος*; furthermore there are no typically Macedonian features in the toponymy of Pieria.

5.4.2.1. Regions and Tribes

Αἰολίης, -εῖς, cf. *αἰολός* 'quick-moving, nimble'. cf. Schwyzer 1934-39: 79.

Θεσσαλία, *Θεσσαῖοι* (Thess. *Πενθαλός*, Boeot. *Φενταλός*, Att. *Θενταλός*), cf. *θεοοασθαι* aor. 'to pray' from **gʷhēdʰ-s-*.

**Αγρός*, see below.

Πιερία, *Πιερές* = Myc. *piwere(s)*, cf. *πίων* (f. *πίερα*), *πίερός* 'fat; wealthy; abounding, rich'.

Πεσσαυβία, *Πεσσαυβοί*, see above.

Ἑσσιῶνις, the toponym *Ἑσσιᾶς*, the personal name *Ἑσσιᾶς*, derivatives from *ἔστι* 'hearth'.

5.4.2.2. Rivers

Πηγαῖός, cf. OBG *pēna* 'foam; scum'.

Ἴων (gen. *Ἴωνος*) from **ια-ῶν* 'noisy', a derivative of *ιά* 'voice, cry'; cf. *Ἰάων*, a river in the Peloponnese; the name *Ἰά(φ)ωνες* > *Ἴωνες* is of the same origin.

Κουράλιος (Kw-) from Ion. *κούρη*, Dor. *κώρα*, Att. *κόρη* 'girl', cf. *κοράλ(λ)ιον*, a diminutive of *κόρη*.

Κονάριος from *κῆα* 'hole' (ov = u instead of v = ü).

Ληθαῖος = *Λιθαῖος* (η = i and probably au = s), a derivative of *λίθος* 'stone', cf. *λίθιος* (Hom.), *λίθιος* 'stony'.

Τιταρήσιος, see below.

Εὐρωπός (*Eŭr-*) = *εὐρ-ωπός* 'wide' from *εὐρύς* 'wide', cf. *στεν-ωπός* 'narrow' from *στεν(F)ός* 'narrow'.

Mityls (Livy; influenced by the personal name *Μίτυς*) with dissimilation from **Μυτυς* (or with metathesis from **Μνυτις*), cf. Arm. *mute* 'dark', E. *mud*.

Λεῦκος = *λευκός* 'white'.

Βαφύρας, a river which disappears into the ground, from **βαφ-υρός* 'sinking', cf. *βάπτω* 'to dip', *βαφή* 'dye', cf. Georgiev 1958b: 15.

Ἐπιπτός 'impetuous, turbulent', cf. *ἐνίπῃ* 'rebuke; violent attack'.

Σῦς, *Συός*, a retroformation from *Συός* (or *Συών*, *Συ-ίος*) *ποταμός* from *οὔς* 'swine', cf. Bulg. *Svinska reka* 'swine's river'.

Λιβηθρα, a spring on *Λειβήθριον* Mountain, the toponym *Λελβηθρον* = *λελβηθρον* 'channel', cf. *λελβω* 'to pour'.

5.4.2.3. Mountains

Τιτάριον, the name of the town of *Τίταρον* (-*ρόν*) from **kwit-aro-* 'white', cf. Skt. *śvitra-* 'white', see Pokorný 1951-69: 629.

Πισρος, *Πισρία*, see above.

Λειβήθριον ὄρος, see above.

**Ολυμπος*, see above.

5.4.2.4. Settlements and Localities

Πύθιον, cf. *πύθω* 'cause to rot'.

Δολλχη from *δολεχός* 'long'.

Ἀζώριον, *Ἀζόριον*, *Ἀζωρος*, compounds from *ἄζα* 'heat; dryness' and *ὄρος*, Dor. *ὄρος* 'mountain'.

Γόννος (-*οι*, -*ον*) = Hom. *γοννός* 'high ground', which is derived from *γόνυ* 'knee', cf. Aeol. *γόννα* pl.

Γυρτών, -*ῶνος* (*Γυρτώνη*) 'a place for meetings', which is derived from *ἀγείρω* 'to gather together', cf. Solmsen and Fraenkel 1922: 93.

Ὀλοσσών (*Ὀλοσσών*, *Ὀλόσσαν*), a compound from *ὀλός* 'destructive' and *οὖς* 'safe and sound', cf. Hom. *σάω*, ep. *σῶω* 'to save', cf. *ὀλοδ-φρων* 'harmful'.

Ἡλώνη (*Ἡλώνη*), later *Λειμώνη*. *Λειμώνη* instead of **Λειμῶνα* = *λειμῶνα* acc. of *λειμών* 'humid place, meadow' is an erroneously Ionicized (or Atticized) form. *Ἡλώνη* is also an erroneously Ionicized form instead of **Ἡλῶνα* acc. of **Fāl-ών*, cf. **Ἡλῖς*, Dor. **Ἀλῖς* = L. *vallis* from **wal-ni-s*.

Cyretiae (Livy), *Χυρεταίαι* (Ptol.) with the late change *αι > υ* (= *υ*) is a derivative of **χοιρ-εταῖς* or *χοιρ-εῖταῖς* (*εἰ > Dor. η*) 'pigsty', cf. *Χοιρεῖται* ('swine-herds').

Πάλια (St. Byz.) from *πάλος* 'fat'.

Phaika (?) from *φαικός* 'φαιδρός'.

Ereikynton (?), *Ericinium* (Livy), cf. *ἐρείκλη*, a plant.

Μύλαι (-*αι*) pl. from *μύλη* 'mill'.

Μάλ(λ)οια, a derivative of Dor. (= Thess.) *μᾶλον*, Att. *μήλον* 'apple'.

Φάλαννα (-*αννος*) with Aeol. *νν* from *νλ* = *φάλαινα* 'moth', cf. *φαλός* 'white'.

Μητροπόλις = *μητρό-πολις*.

**Αργεῖς* from **Αργ(ε)-εF-ες*, an ethnonym from **Αργος*, see below.

**Αργονοα* (*ον* = *υ* instead of Att. *υ* = *υ*) from *ἄργυρος* 'silver'.

**Αργιοσα* (*Iliad*; Strabo, St. Byz., schol. Ap. Rh.) from **Αργητ-ια* (with a late *ι* from *η*, influenced by *Λάρισσα*; -*τλια* > -*σσα* (Aeolism: Thess., Boeot. *ει* < *η*) derived from *ἀργής*, -*ήτος* 'bright, shining'.

Φαργαδών, -όνες (Φαργηδών with an η = ι; Φαργαδών with assimilation α-ι > α-α), cf. φαργίς, -ίδος 'wrinkle'.

Λιμναία from λίμνη 'stagnant water'.

Πέλλιννα (Πέλλιννα, Πέλλινναϊον, *Pellinacum*, Πέλλινναϊον), a derivative (with a late assimilation δν > νν) from πελιδνός 'livid'.

Μελίβουα, the ethnonym Μελίβοι(ο)εῖς, from *Μελίβοα, pl. of μελι-βόας 'sweet-singing'.

Γοννοcondylos (Livy), a town in Thessaly, cf. Γόννος and γόνδυλος 'knuckle'.

Αἰγίνιον, cf. αἶγ-νος 'goats', a derivative of αἶξ, αἶγός 'goat', cf. Αἶγνα, Αἶγνον, Αἰγίνιον, Αἰγῆς, etc.

Ὀξύρεια, a derivative of ὄξυρος 'sharp'.

Φαλιώρη (Φαλιόρεια, *Phaloria*) = Dor. φαλὰ ὄρη 'white mountains'.

Τριζ(ζ)η (-α), the ethnonym Τριζαῖοι, a derivative of τρίζος 'δρυιθάριον καὶ βασιλεὺς ἐπὶ τῷ Ηέσιον (Hesych.)

Γόμφοι from γόμφος 'bolt; bond, fastening'.

Θώμη (later Ἰθώμη, probably from ἰς Θώμη), cf. θωμός 'heap'.

Μητροπόλις = μητροπολις.

Μεθώνη (Μηθ-ώνη) < *ΜεθF-ωνα, a derivative of μέθρ 'wine'.

Ἄϊον < ἰFιον, a derivative of Ζεύς, gen. ἰ(F)ός.

Λαπαθοῦς, -οῦριος from λάπαθος or λάπαθον, a plant.

In the region we have delineated there are, furthermore, a small number of toponyms of Macedonian, Illyrian, Pelasgian, and other origin, but they were introduced later: on the whole, the ancient Greek toponyms prevail in this region.

5.4.3. Ἄργος, Ἀργεῖοι

The most ancient traces of the two common names for the Greeks, Ἕλληνες and Γραικοί, bring us to Epirus.

Furthermore, one of the three Homeric names for the Greeks, i. e., Ἀργεῖοι, is a derivative of the place name Ἄργος. Northern Greece was the center of the distribution of this toponym.

(a) Ἄργος Ὀρεστικόν in the basin of the Haliacmon River; the name of the region, *Argestaeus campus*, which is situated near the upper part of Haliacmon, is derived from Ἄργος.

(b) Ἄργος (= Ὑπέριος), on the island of the Phaeacians (St. Byz.), which usually is identified with the island of Corcyra.

(c) Ἄργος Ἀμφιλοχιζόν in the region of Amphilochia (southern Epirus).

(d) Ἀργεῖς (Hesych.) in north Thessaly from *Ἀργ(ε)-F-ες, an ethnonym from Ἄργος.

(e) Ἄργος Πελασγικόν, the name of the valley of Thessaly near the Peneus River (*Iliad* and schol.) or of Thessaly (Strabo and Apollonius) or of Larissa (Eust.). Πελασγικόν is a late addition in order to distinguish it from other towns and regions with the same name: Ἄργος Πελασγικόν means 'Ἄργος in the (ancient) region of the Pelasgians'.

(f) Ἄργος Ἰαόν (Odyssey and schol., Strabo, St. Byz., Eust., Hesych.), usually Ἄργος Ἀχαιζόν (attested since the *Iliad*), the name of a principal town in Argolis whose fortress was called Ἀχαιο(σ)α, but also the name of the region as a whole, as well as of the entire Peloponnesus. 'The Ionian Argos' is a retrograde derivative of Ἄργος *Ἰᾶοι < *ἸᾶFοι < *ἸᾶFη-αι loc. pl. from Ἰᾶ(F)ρες, literally 'Argos in (the region of) the Ionians', cf. the similar names Ἄργος τὸ ἐν Ὀρεστικῷ (= Ὀρεστικόν) and Ἄργος ἐν τῷ Ἰονίῳ (= Ἰπαιον in Apulia). Thus this town initially had the pre-Greek name Ἀχαιο(σ)α; when the Greeks

conquered the Peloponnesus it was called "Αργος. The Ionians were the first Greeks in the Peloponnesus and at the beginning the town was called "Αργος "Ιασον 'Ionian Αργος' later, when it was conquered by the Achaeans, Argeians (and Danaans), it was called "Αργος "Αχαϊκόν or "Αργεία (χώρα).

(g) "Αργος, a town in the region of Troizen (St. Byz.) in northwestern Peloponnesus.

(h) "Αργος, a town on the island of Nisyros (St. Byz.).

(i) "Αργος, a town in Caria (St. Byz.).

(j) "Αργος = "Αργειόπολις, a town in Cilicia (St. Byz.).

From the distribution of the toponym "Αργος and of the ethnicon "Αργεῖοι the following conclusion can be drawn. The "Αργεῖοι were a people whose original home was in northwestern Greece. From there, during the 3rd millennium B. C. or at the latest during the beginning of the 2nd millennium, the Argeians conquered the region which was later called Thessaly (to the south of the Peneus River) and which until then had been populated by pre-Greek tribes (Πελασγοί). At that time the ancient name of this region (probably Πελασγία from *Πελαστιά, cf. Πελασγῶντις) was changed into "Αργος (Πελασγικόν), and later, when it was conquered by the Greek tribe Θεσσαλοί, the region was called Θεσσαλία. A tribal alliance was formed (τρίφυλος) in this region among the "Αργεῖοι, the population of "Αργος Πελασγικόν (northern Thessaly), "Αχαιοί, the population of "Αχαιά (Φθιώτις in southern Thessaly), and Δαναοί (cf. the name of the "Απιδανός River in the region which was later called Θεσσαλιῶτις): and it is for this reason that Homer (towards the end of the Mycenaean period) designated the Greeks with three names: "Αργεῖοι, "Αχαιοί, or Δαναοί.

Before this migration another Greek tribe, the "Ιά(Φ)ονες, which probably lived in the region of the "Ιων (< *ΙαΦων) River in northwestern Thessaly, moved southwards, probably under the pressure of the Argeians, and conquered Boeotia ("Αονία, "Αονες probably from *Υᾶωνες), Attica, Euboea ("Ιᾶονες > "Ιωνες), and the Peloponnesus ("Αργος "Ιασον).

Starting from the region which was later called Thessaly, the Argeians, the Achaeans, and the Danaans conquered the Peloponnesus; the town of "Αργος "Ιασον (in Argolis) was then called "Αργος "Αχαϊκόν.

During the second half of the 2nd millennium B.C. the Argeians, the Achaeans, and the Danaans colonized several parts of the southwestern and southern coast of Asia Minor, as well as the island of Cyprus. At that time the Hittites knew of them by the names *Ahhiyawā* (= "Αχαιοί or) *Αχαι(ι)Fā from *ΑχαιF-ia¹⁴ 'the country of the "Αχαιοί', and *Arzawa* (*Arzawwa*). Hidden in the name *Arzawa* is probably the late Mycenaean (= Cyprian) form of the name *ΑρζαιFā < *Αργ(ε)F-ia 'the land of the Argeians', a derivative of the ethnicon *Αργεεύς 'inhabitant of Argos' or of the ethnicon itself *ΑρζFες from *Αργ(ε)-F-ες 'inhabitants of Argos'.¹⁵ The same form was preserved in Latin: *Argivī* originates from *ΑργεῖFoi 'inhabitants of "Αργεία', a derivative of *Αργ-εFā < *Αργ(ε)-F-ia 'the country of the *Αργ(ε)-F-ες'.

The towns of "Αργος in Caria and "Αργειόπολις in Cilicia are the traces of the Argeian colonies (= *Arzawa*) in Asia Minor.

¹⁴ The shift *εFi* > *aiF* is common Greek (cf. Schwyzler 1934-39: 272-273) while *γ(ε)* > *ζ(ε)* is (Arcado-)Cyprian (cf. Schwyzler 1934-39: 329).

¹⁵ The shift *γ(ε)* > *ζ(ε)* is (Arcado-)Cyprian.

The toponym **Aq̥yos* 'white (town)', an *es*-stem neuter after *āstn* n. 'town', is related to the adjective *ἀργός* 'bright, white, shining' (originally an *es*-stem). This adjective (or its derivatives) very often appears in the Greek toponymy, cf. **Aq̥uon* (τὸ ὄρος), a mountain and the older name for Mycenae (Plut.), **Aq̥eyonon*, a cape in Ionia (which was called 'White Cape' during the Middle Ages), in Sicily, etc.

The ethnicon from **Aq̥yos* should be **Aq̥ye[σ]-eús*, cf. Myc. *creen* = **El̥e[σ]-eús* from the place name **Elos* = *ēlos* n. 'marshy ground'. Thus **Aq̥-γείος* > **Aq̥yeíos* may be an adjective derived from **Aq̥yos*, i. e., **Aq̥ye[σ]-ios* 'Argeian', but it may also be derived from **Aq̥y(e)eiFā* 'the land of the Argeians', a derivative of **Aq̥ye-eús* 'inhabitant of Argos'; the form **Aq̥yios* (Eur.) from **Aq̥y(e)-ēF-ios* confirms this. **Aq̥yēia* 'Argolis' may have originated from **Aq̥ye[σ]-ia* 'land of Argos' but more probably it is derived from **Aq̥y(e)-ēF-āz* 'land of the Argeians' which corresponds to L. *Argivī* from **Aq̥y-eiF-oi* and Hitt. *Arzawa* from **Aq̥zē(i)Fā* < **Aq̥y(e)-ēF-āz*.¹⁶

5.4.4. Wrong Suppositions

Proper names, more specifically place and river names, play an important role with regard to the languages of the pre-Greek population of Greece and Asia Minor because the relationship between these languages is established on the basis of these names. After Kretschmer formulated the theory of the pre-Indo-European origin of the pre-Greek population, Fick in his book *Vorgriechische Ortsnamen als Quelle für die Vorgeschichte Griechenlands* (1905), tried to collect all the pre-IE place names in ancient Greece. Subsequently under the strong influence of Kretschmer's theory, he defined a great number of place names as being pre-IE, though their Greek origin was clear or at least quite probable: this he did mostly apodictically and without any serious argumentation, but because Kretschmer's theory was dominant for a long time, Fick's erroneous list was constantly enlarged instead of being corrected.

In Fick's book there are a number of obvious errors and groundless suppositions: for instance, he cites a pre-Greek name **Oq̥r̥ησ(σ)ός* which is the result of a printing mistake (O instead of Θ); actually, it is a retroformation from *Θερήσιοι*, an ethnicon from **Θqv̥h̥σ(σ)a* which is a derivative of Gr. *θύρον* 'reed'. The place name **Eqr̥íthima*, which is given as being pre-IE, is a fiction: in reality it is a retroformation from the epithet of Apollo **Eqr̥ed̥ímios*, **Eqr̥ed̥éimios*, **Eqr̥v̥d̥íβios*, a derivative of *ἐqv̥d̥íβη* 'wheat rust'. The toponym *Aq̥ūtis*, cited as being pre-IE, is *Aq̥ūtis*, a derivative of Gr. *λόφος* 'hill'. The place name *Kalivd̥ón*, cited as being pre-IE, is an ancient Greek formation, meaning 'beautiful (good) water', and is a usual type of place name formation. *Kaíq̥artos*, the name of a place and a river, which is given as being pre-IE, is an ancient Greek word corresponding exactly to Skt. *kevaṭa-ḥ* m. 'cave, hollow' from IE **katw̥r̥to-*, etc. This problem is discussed in detail in my paper *Contribution à l'étude de la toponymie grecque: noms de lieux prétendus préhelléniques* (1948).

¹⁶ On the Myc. suffix *-ewa* = *-ewija* from *-ēF-ia* and *-ēF-ū(i)a* see section 3.1.2.

Unfortunately, errors such as those made by Fick continue to be made even now. Thus, for instance, Chadwick in his article "Greek and Pre-Greek" (1969) agrees with Fick and assumes that the Greek toponym *Ἀστυπάλαια* is of pre-Greek origin and that it is related to *Στύμφαλος*: this is a supposition without any scientific value. Chadwick's assertion is based on *a* in *-παλ-* being long and "the concord being erroneous" (p. 83). But the length of *a* given by Pape and Benseler in *Wörterbuch der griechischen Eigennamen* (1911: 166) is a printer's mistake in which this dictionary abounds. Actually, this toponym is met in poetry only in Apollonius Rhodius (I, 488) and Ovidius (Met. VII, 461), where *a* is short. The name *Ἀστυπάλαια* (the name of one of the Cyclades Islands and of four promontories in Attica, Caria, and on the islands of Kos and Samos) originally was an attributive *bahuvrihi* compound of *νησος* 'island' or *ἄκρα* 'headland, cape, height' as *ἄστυ παλαιὸν ἔχουσι*. This is the same type of formation as *ἀνδράγαθία* from *ἄνδρ' ἀγαθόν*, *ἱπποπόταμος* from *ἵππος ποτάμιος*, etc. The change of gender is determined by the general names *νησος* f. or *ἄκρα* f., while the difference in stress is an ordinary phenomenon in proper names formed from appellatives.¹⁷ Thus when suggestions are offered regarding place names, the scholar who presents them should be well acquainted with the principles of scientific onomastics.

Often Greek toponyms are apodictically and groundlessly defined as pre-Greek. Such is the case for instance with the Mycenaean *wareukara*¹⁸, which is = *Fálē(i) ὑγρᾶ(i)* (dat.-loc.) 'humid valley'; this is a usual type of toponym formation. Proper or common nouns are very arbitrarily declared to be pre-Greek or pre-IE by many authors and this is done with a marked tendency towards pointing out how sceptical they are about some etymologies.¹⁹ But vain declarations about Greek words being pre-Greek or pre-IE cannot be called scepticism: this is a pre-conceived idea which in scholarly terms is worse than an attempt at determining the etymology of Greek words on the basis of the Greek language.

5.5. The Macedonian Region

The problem of the ethnic affiliations of the ancient Macedonians and of their language has often been the object of investigations.²⁰ The difficulty here is that the linguistic material is very scarce.

The original home of the Macedonians was the basin of the Haliacmon River. The ancient toponymy of this region is very similar to Greek toponymy.

¹⁷ See details in Georgiev 1941: 232-233.

¹⁸ Cf., for instance, Doria 1961: 422.

¹⁹ Thus for instance *ξένος*, *αἰετός*, *θεός* in Chadwick 1961: 82-83.

²⁰ On the language of the ancient Macedonians see Pisani 1937; Kalleris 1954 (quite subjective); Russu 1938; Poghirc 1960 (with bibliography).

5.5.1. The Basin of the Haliacmon River (Southern Macedonia)

5.5.1.1. Regions and Tribes

Μακίτα 'highland', *Μακεΐα* = *Μακεδονία*, cf. Gr. *μακρός* 'long, large', *μήκος* n. 'length', see Fick 1897: 224.

Μακεδονία, *Μακεδόνες*, cf. Hom. *μακεδνός* 'long, tall'.

Ὀρεοΐα, *Ὀρεοΐς*, see above.

Argestaeus (campus), a derivative of *ἄργος*.

Ἑλιμαία (-εῖα, -ίαι, -ίμιοι, Xen., etc.), the ethnonym *Ἑλιμιῶται*, *Ἑλιμιῶται* (*Ἑλεμιῶται*), a derivative of the place name *Ἑλιμα* (= *Ἑλιμία*) from *ἕλνμος* 'millet': *v* > *ι*.

5.5.1.2. Rivers

Ἀλι-άκμων 'rolling (dragging) stones'.

Βόρβορος = *βόρβορος* 'mud, slime'.

Castoris lacus from *κάστωρ* 'beaver'.

Ὀλγανος, a tributary of the *Ἀλιάκμων* River in the region of *Βέρομον* (St. Byz.), from **wolg-*, cf. Lett. *valgs* 'humid' (**wolgos*), OBG *vlaga* 'humidity' (**wolgā*).

5.5.1.3. Mountains

Βαρυός, -οῦντος from **Fagr-óFenr*, cf. *ἀρήν* (gen. *ἀρνός*), Gortynian *Φαρήν* 'lamb; ram'.

Bora (mons) = OBG *gora* 'mountain' from **gworā*.

Cambunii montes (Livy), between southern Macedonia and Thessaly, from **(s)kamb-* *ōn-ia-*, cf. Gr. *Σκαμβών-ιδαι*, Attic demos, *σκαμβός* 'crooked, twisted', see Fick 1900: 224. There is no reason for this name to be considered Illyrian, as Mayer (1957-59: 56) does. The lack of a mobile *s* is frequent in the Greek language, especially in toponyms.

5.5.1.4. Settlements and Localities

ἄργος (*Ὀρεοικόν*), see above.

Αἰγανή from *αἶγ-* 'goat' which is confirmed by the contemporary Bulgarian name *Kožani* from **koz-jān-es*, a derivatives of *koza* 'goat'. The latter name, *Αἰανή* (St. Byz.), points to the disappearance of the intervocalic *-g-*, a typical phenomenon of the later Macedonian language, see below.

Φυλάκη (-αι), on the boundary of southern Macedonia and Thessaly, = *φυλακή* 'watching, guarding' (a borrowing).

Celetrum (Livy), a Macedonian town in the region of Orestis (near Kostur Lake), cf. *κελέτρα* f., probably 'pasture', a derivative of *κέλλω*, cf. Frisk 1954-70: 815; cf. also *κέλετρον* ὃ τοὺς ἰχθύας θηρῶσιν ἐν τοῖς ποταμοῖς.

There are no place names in this region with the consonants *φ*, *θ*, *χ* from IE *b^h*, *d^h*, *g^h*, *g^{wh}* (*Φυλάκη* = *φυλακή* is a borrowing). This is an important fact because in Macedonian the IE voiced aspirates (MA) became voiced stops (M), which is confirmed by the following three toponyms from the basin of the Haliacmon River.

Βάλλια (Theognis in St. Byz.) from **Baλ-ia* (< *-ia* < *-iFa*, as in Aeolian), cf. the Macedonian proper name *Bálias*, Pel. *βαλιός* 'white' from **bhəl-* 'white'.

Βέρ(υ)οια (*Βερρόη*), a town (Thuc.) and a river (St. Byz. s. v. *Μίρζα*), now called *Verija* (Bulg. *Ber*), which probably comes from **bheru(i)yā*, cf. L. *fero(e)o* 'to boil', Ir. *berbaim* 'to boil' (see Pokorny 1951-69: 143-145); there is also a Thracian town by the same name. Detschew (1957: 53) considers it to have been founded by the Bryges (= Phrygians).

Βέρμιον (τὸ ὄρος; Hdt.), *Βέρνον* (τὸ ὄρος; D. Sic.) probably from **bherm-* or **bher-n-*, see Detschew (1957: 53) who stresses the fact that this region was populated by the Bryges (= Phrygians).

5.5.2. Characteristic Features of the Comparative-Historical Phonology of Macedonian

The phonetic shift MA > M, which is typical of the Macedonian language, appears in numerous Macedonian glosses and proper names, for example:

ἄβροῦτες pl. 'eyebrows', cf. Gr. *ὄφρος* 'eyebrow'.

ἀδῆ· οὐρανός, *Μακεδόνες* (Hesych.) = Gr. *αἰθήρ* 'ether, sky', *ἄδρα·α* = *αἰθρία* 'blue sky'.

βαβροῖν 'ἐπόστασις ἐλαίου κατὰ Μακεδόνες' (Hesych.) from **gʷabh-*: Gr. *βαφή* 'dye', *βάπτω* 'to dip'.

Βάλακρος, a personal name, = Gr. *φαλακρός* 'bald'.

Βερενίκη, a personal name, cf. Gr. *Φερένικος*.

Βίλιππος = Gr. *Φίλιππος*.

θάνατος (Plut.): Gr. *θάνατος* 'death'.

Δάρρων, a god worshiped by the sick (Hesych.), = Gr. *ἐάρων* from **dh̥rs-ōn*.

δόραξ· σπλὴν ὑπὸ Μακεδόνων (Hesych.) = Gr. *θώραξ* 'corselet, chest'.

The IE voiced stops (M) were preserved unchanged; this is confirmed by numerous examples: *βαβροῖν* from **gʷabh-*; *Bora (mons)* from **gʷorā*; *γόδα· ἔντερα*, *Μακεδόνες* (Hesych.) = Skt. *gudā-m* 'intestines'; *δάουλλος* 'δραῦς'; *Δᾶγος* from **daF(o)-agos*; *Κόροραγος* from **Kor̥i-agos*; *ἀργίπους· αἰτός*. *Μακεδόνες* (Hesych.) = Skt. *ṛjipyā-h*, an epithet of the falcon.

The IE voiceless stops (T) were also preserved unchanged: *ἀργίπους* = Skt. *ṛjipyā-h*; *Βάλακρος* = Gr. *φαλακρός*; *Βερενίκη*, cf. Gr. *Φερένικος*; *Κόροραγος*, from **Kor̥i-agos*; *κυνούπες· ἄρκτος* (instead of *οἱ* ?), *Μακεδόνες* (Hesych.), cf. Gr. *κνωπεύς* 'bear'; *ἀκρουνοί· ὄρεα ὑπὸ Μακεδόνων* (Hesych.), cf. Gr. *ἄκρων* 'extremities of an animal's body', *ἀκρονία* 'amputation'; *Πέλλα* = *πέλλα* 'stone' from **pelsā*; *ῥάμια· βοτρίδια, σταγυλὶς*, *Μακεδόνες* (Hesych.), cf. Gr. *ῥᾶξ* 'grapes', L. *frāgum* 'strawberry'; *τελεσίας* from **kʷeles-*, see below.

There is only one Macedonian gloss with *k* from IE *g*: *ἀρκόν· σχολὴν*, *Μακεδόνες* (Hesych.), cf. Gr. *ἀργός* 'who does not work, lazy' from **ā-Ferγός*; *k* in *ἀρκόν* can be explained as a secondary shift of *rg* > *rk* (cf. Pisani 1937: 17-18) or else as a Phrygian borrowing (see below).

The problem is entirely different in the following three words: (1) *κεβαλή* (Hesych.; *Et. M.*) or *κεβλή* (Call.; *Et. M.*) which is also found in the compounds *κέβλη-πυρις* (Ar., Hermipp. Com.), *κεβλή-γονος* (Euph., Nic.), *κεβλήνη* ἢ *ὀρίγανος* (Hesych.), as well as in *κέβλος· κυνοκέφαλος, κῆπος* (Hesych.); (2) *κάναδοι· αἰάγονες, γνάθοι* (Hesych.); (3) *κόμβους· ὀδόντας γομφίους* (Hesych.).

Of these three glosses only the first one is attested as Macedonian: the two derivatives, *Κέβαλος* (D. Sic.) and *Κεβαλῖνος* (D. Sic., St. Byz.), are Macedonian personal names.

The two glosses, *κάναδοι* and *κόμβους*, are not recorded as Macedonian. They could be considered to be Phrygian (borrowed into Macedonian?). In this case *κάναδοι* = *γνάδοι* would be a derivative of **gnad^ho-* and have an epenthetic vowel (as in Mac. *κνωούπες*, cf. Gr. *κνωπεύς* 'bear') and *κόμβος* is = Gr. *γόμπος* from **gomb^ho-s*; in Phrygian the consonant shift is a regular phenomenon.

The situation is different with the gloss *κεβαλή* (*κεβλή*). This word is recorded not only as a gloss: *κεβλή* is found in compound words in the writings of Greek authors from the 5th century B. C. Furthermore, in Hesychius one finds the gloss *γαβαλάν· ἐγκέφαλον ἢ κεφαλὴν*, which is derived from **γεβαλά* with the assimilation *ε-α > α-α*. It can be assumed that *κεβαλή* in *Et. M.* (10th century A.D.) *τὴν κεφαλὴν κεβαλὴν λέγουσι* (*scil. οἱ Μακεδόνες*) is a hypercritical (etymological) graphic under the influence of classical Greek instead of *τὴν κεφαλὴν γεβαλὴν*, since during the Byzantine period -ν κ- (in *sandhi*) was pronounced -γ γ-, as later in Modern Greek. Thus in the texts cited three similar words were mixed: Pel. *κεβ(α)λή*, Mac. **γεβαλά* (later *γαβαλά*), and Gr. *κεφαλή* from **g^heb^h(ə)lā*. Macedonian has many phonological peculiarities which have exact correspondences in Greek.

Preservation of the vowel *o*: *Bora* (*mons*) from **gworā*; *Κόρραγος* from **koriago-s*; *Ὀλγανος* from **wolg-*, see above.

IE sonants appear as *αφ* (*φα*) and *α* (and as *αν* before a vowel): *δάνος* 'θάνατος' from **d^hwnho-s*; *δάουλλος* 'δοῦς' from **d^hlu-*; *Ἀρραβ-αῖος* from **rsu-b^h(o)-*; *Λάρρων* = Gr. *Θάρρων* from **d^hrs-ōn*; *ἀργίπους*, cf. Skt. *rjipyā-h*; *ξάματα* from **srag-mnt-ə*.

IE voiceless (T) and voiced (M) stops are preserved, see above.

IE velars ('palatals') are preserved unchanged: *ἀργίπους*, cf. Skt. *rjipyā-h*.

IE labiovelars shifted into labials before *a*, *o*, and into dentals before an *e*: *βαβρήν* from **g^wab^hr-*; *Bora* (*mons*) from **gworā*; *τελεσίās* from **k^wel-es-lās* (?); cf. also *(Βίλ)-ιππος* from **ekwo-s*.

The antevocalic initial *s* disappeared: *ἀλήη κάπρος*, *Μακεδόνες* (Hesych.), cf. L. *sallo* 'to jump'.

IE *sr* > Mac. *r*: *ξάματα* from **srag-mnt-ə*.

The following later changes have correspondences in some Greek dialects:

en > *in*: *ινδέα* *μεσημβρία*, *Μακεδόνες* (Hesych.) = Gr. *ἐν-δία* *μεσημβρία* (Hesych.)

am > *om*: *κοιμάραι* ἢ *κομάραι* 'καρίδες', *Μακεδόνες* (Hesych.) = Gr. *κάμμαροι* 'a kind of crab', G. *Hummer*.

ia > *ea*: *ινδέα*, see above.

ō > *u*: *κνωούπες*, cf. Gr. *κνωπεύς* 'bear'; *ἀκρονοί*, cf. Gr. *ἄκρων*.

Prothetic vowels: *ἀ-βροῦτες* (or *-Fες*), cf. Gr. *δ-φρεῦς* 'eyebrow'.

Epenthetic vowels: *κνωούπες*, cf. Gr. *κνωπεύς* 'bear', *κνωπός* 'wild animal'.

IE intervocalic *w* disappeared: *ιν-δέα* from **en-diwi(yā)*; *Λάγος* from **ΛαF(o)-αγος*.

IE *d^hw* > *d-*; *δάνος* 'θανάτος' from **d^hwnh-*.

IE *ls* (*ly*) > *ll*, *rs*, *ri* > *rr*: *Πέλλα* from **pelsā*; *Ἀρραβ-αῖος* from **rsu-b^h(o)-*; *Λάρρων* from **d^hrs-ōn*; *Κόρραγος* from **Kori-αγος*.

IE *b^hm*, *gm* > Mac. *m*: *δοάμος* 'bread' from **d^hrb^h-m-* or **d^hrgw^h-m-*, cf. Gr. *τρέφω* 'to feed'; *ξάματα* from **srag-mnt-ə*.

²¹ Nevertheless *κάναδος* could be compared as a Macedonian word with *κναδάλλεται*; *κνήθεται* (Hesych.), Gr. *κνήθω* 'to scratch', Lith. *kandū* 'to bite, gnaw' from **konad^h(h)-*, see Frisk 1954-70: 888.

IE (*sn*), (*ni* >) *ny* > *nn*: *Κύννα* from **zvr̥ta*.

IE intervocalic *g* dropped out: *Τραυλος* (inscription) = *Τράγυλος* (St. Byz.); *δοῖες* *στρούθοι*, *Μακεδόνες* (Hesych.), cf. *δοῖξ* *στρουθός* (Hesych.):²² *Αἰγανέη* > *Αἰανή*, see above.

Furthermore, the nucleus of the Macedonian vocabulary consists of words which have exact correspondences in Greek. The importance of these words and the archaic phonological character of Macedonian lead to the conclusion that these are not borrowings but inherited words: this fact is confirmed by the genetic unity of Macedonian and Greek.

Moreover, the numerous lexical and phonological isoglosses in Macedonian and the different Greek dialects confirm the supposition of genetic unity.²³

But in Macedonian one finds four essential differences from all Greek dialects, the first of which is certain and the remaining three of which are probable.

(1) The shift of *MA* > *M*, see above.

(2) The shift of unstressed *ai* into *a*: *ἀδῆ* = Gr. *αἰθήρ*; cf. Gr. *ἄδραία* = *αἰθρία*. The lack of final *r* is an archaic phenomenon: in Greek *-r* appears in the nom. sing. under the influence of the other cases: *ἀδῆ* = Gr. *αἰθήρ*.

(3) The preservation of intervocalic *s* (*-s* > *-z*): *ἄλιζα ἡ λευκὴ τῶν δένδρων*, *Μακεδόνες* (Hesych.) from **alisā*, cf. Russ. *ol'ha* 'spruce', OHG *erila*, *elira* 'alder tree' from **alisā*, L. *alnus* 'alder tree' from **alisno-* (Pokorny 1951-69: 302).

Table 11

The Historical Phonology of Macedonian

Indo-European	Macedonian
<i>o</i>	<i>o</i>
<i>en</i>	<i>in</i>
<i>am</i>	<i>om</i>
<i>ō</i>	<i>u</i> (after the 5th century B. C.)
<i>ai</i> (unstressed)	<i>a</i>
<i>ij</i>	<i>a</i> (<i>an</i>)
<i>ī</i>	<i>ar</i> (<i>ra</i>)
<i>-w-</i>	<i>o</i>
<i>T</i> (enuēs)	<i>T</i>
<i>M</i> (ediae)	<i>M</i>
<i>MA</i> (spiratae)	<i>M</i>
<i>k, g, g^h</i>	<i>k, g</i>
<i>k^w, g^w, g^{wh}</i>	<i>p, b</i> (before <i>a, o</i>)
	<i>t, d</i> (before <i>e</i>)
<i>-g-</i>	<i>o</i> (late shift)
<i>kt</i>	<i>tt</i>
<i>dhw</i>	<i>d</i>
<i>ls, ly</i> (<i>li</i>); <i>rs, ry</i> (<i>ri</i>)	<i>ll; rr</i>
<i>ny; sn</i>	<i>nn</i>
<i>s(w)-</i>	<i>o</i>
<i>-s-</i>	<i>s</i> (<i>z</i>) ²
<i>sr-</i>	<i>r-</i>

²² Cf. Pisani 1937: 23.

²³ Cf. Poghirc 1960: 144.

¹⁹ *Ἐδεσσα*, now called Bulg. *Voden* 'watery', from **wedēs-ya* 'watery'. *τελεσίαις Μακεδονική... ὄρχησις...* is akin to Skt. *carati* 'to move' from **k^wel-* (cf. Hoffman 1906: 91-92; Pisani 1937: 30). The formation reveals the form **k^weles-iā(s)* as original rather than **k^weletīā(s)*, cf. Gr. *τέλος* n. 'achievement, end' from **k^weles-*, OBG *kolo* n. 'wheel', gen. *kolese* from **k^woles-*, Serbocroat. *kolo* 'circle, dance'.

In Greek the shift MA > TA and the disappearance of intervocalic and initial antevocalic *s* are attested as early as the 14th-13th century B.C.: thus this is a very old phenomenon in Greek, and therefore Proto-Macedonian and Proto-Greek had split at a very early stage before the appearance of the main Greek dialects.

All of the material we have analyzed shows that **Macedonian must be defined as very closely related to Greek** and, at the same time, there was a close connection with Phrygian.

The historical phonology of Macedonian is shown in Table 11.

5.5.3. The Mixed Character of the Macedonian Toponymy

The original home of the Macedonians was in the basin of the Haliacmon River. From there the Macedonians gradually penetrated into the northern and eastern frontier regions and superimposed themselves on Phrygian (Paeonian, Bottieian), Mysian (Mygdonian, Dardanian), Thracian, and Illyrian substrata. In this way a mixed Macedonian language was formed which became even more remote from Greek. Later, after the 5th century B.C., the process of Hellenization started. This explains the extremely mixed character of the Macedonian toponymy.

Κιτάριον ὄρος (Ptol.) probably = Gr. (Thess.) *Τιτάριον* (ὄρος) from **kwitaro-* 'white'; **kwit-* > *Kir-* instead of *Tir-* through dissimilation.²⁴

Κίτρον (Strabo), *Κίτρος* (Schol. Dem.), a town in Macedonia (formerly *Πόδνα*), with the same dissimilation as in *Κιτάριον* from **kwitro-*, Skt. *śvitra-* 'white'.

Begorrites lacus (Livy), now called Ostrovo Lake, between two mountains, from **dway g^woray*, dual. 'two mountains' with *dw* > *b* (as in Latin), *ai* > *ae* > *e* and dissimilation (?) *dw-g^w* > *dw-g*. *Begorrites* is derived from the name of the locality by adding the suffix *-(i)της*, as in the Greek river names *Κερυνίτης*, *Ἀσπίτης*, *Γαδάρτης*, derivatives of the place names *Κερύνεια*, *Ἀσπίς*, *Γαδέα*.

Ἐορδοί (Hdt., Thuc.), *Ἐορτος* or *Ἐορδός* (Hesych.), *Ἐορδαῖοι* or *Ἐορδέται* (Ptol.), *Ἐορδαῖοι* (Arr.), *Ἐορδαροί* (Georgius Syncellus), the town or locality *Ἐορδία* (Thuc.) or *Ἐορδαία* (St. Byz.), cf. *Ἐορδαϊκὸς ποταμὸς* (Arr.), now called Devol. The tribe initially lived in the region around Begorrites Lake and later in the region between the Axios and Strymon Rivers. Probably = Gr. *ἑορτή*, Ion. *δορτή* 'religious festival' from **FeF^oorta* with *rt* > *rd*; or from **swordo-* = G. *schwarz* 'black'.

Ῥόδος (v. l. *Κόρος*; Thuc., etc.), the name of a town: from *ῥόμος* with a phonetic shift *oi* > *oo* *Rhoedias* (Pliny), a river in Macedonia, cf. *βοῖβδος* 'noise' or cf. *βοῖζος* (*-g^wyo-s*) 'whistling', *βοῖζέω* 'to whistle'.

Λιν-δοβήμη, a town in Macedonia (St. Byz.), 'Zeus-hain' (Brandenstein 1936b: 411-442) from *Λιν* 'Zeus' and *-δοβήμη*, cf. Gr. *δορυμός* 'copse, thicket'.

²⁴ Cf. Mac. *Γορπιαῖος* instead of **Βορπ-* from IE **g^whor(i)kw-*, see Pisani 1973: 11.

Εἰδομένη (-ή), a town in Macedonia, = *Ἰδομένη*, see above.

Κραταία, a fortified place in Macedonia, from *κραταῖος* 'strong'.

The following names are not Macedonian:

Βοτρία: Phrygian, see below.

Κέλλαι from **gwelnā* = G. *Quelle* 'spring': (Phrygian or) Thracian (see section 4.1).

Ἀζιος: Daco-Mysian, cf. *Ἀζιος* in Scythia Minor (Dobrudja), see section 4.1.

Βαροδονάεις, *Ὀβαροδάσιος*, *Βαροδάσιος* from **swordo-worī* 'black water': (Daco-)Mysian, see section 4.1).

Μυρόνες, *Μυρόνια*: Mysian, see section 5.1.

Μίσαι (Plut., etc.) from **medh-yā*: (Daco-)Mysian: *e* > *ie* and *dhy* > *dy* > *ç*.

Ἐρίγων, now called *Crna* 'black', from **eregwo-* 'black': Phrygian.

Σκόδρα: Illyrian, cf. Mayer 1957-59: 315-317.

Αοιδας, *Αοιδας* (Hecat., Suid., schol. Aesch.), *Αοιδας* (Strabo), *Αοιδας* (-ης Hdt.; Eur., etc.), a river in Macedonia, now *Mavroneri*, Turkish *Karaazmak* 'black water': Mysian or Illyrian (with *ū* > *ui* = *oi* > *ū*) from **ludh-iā(s)*, cf. the Illyrian place name *Ludrum* = Gr. *λύθρον* 'defilement of blood'.

5.6. The Proto-Phrygian Region

The ancient authors inform us that Phrygian tribes (called *Βούγες*, *Βοίγες*, etc.) lived to the north of the Macedonians, in eastern Macedonia, in (south-east) Illyria and to the east of the Axios River. The original home of the Phrygians (or of the Proto-Phrygians) was situated in central Macedonia, probably the basin of the *Ἐρίγων* River, but later, under the pressure of the Macedonians, the Phrygian tribes began to move eastwards.

The Phrygian language, which is known to us from about 230 inscriptions found in Asia Minor, is quite close to Macedonian and Greek.²⁵ Phrygian, Macedonian, and Greek originated from a common language which probably existed during the 5th-6th millennium B.C. In eastern Macedonia, in southern Thrace, and in northwestern Macedonia Phrygian superimposed itself on Mysian and Thracian substrata. It seems that the consonant shift in Phrygian was due to the Thracian substratum.

The *Βοττιαῖοι* tribe lived along the Therma Bay near the estuary of the *Ἀξιος* River. The name of the locality of *Βοτρία* on the Therma Bay can be explained on the basis of its situation, from **bhug(h)-ti-* = G. *Bucht* 'bay'. This name is of Phrygian (or Macedonian) origin, as can be concluded from *Βοτιάειον*, πόλις *Φονγίης* (St. Byz.), as well as from the phonological peculiarities (*b^h* > *b*, *kt* > *tt*); *u* was represented by *o* because in Attic and Ionic *v* was pronounced as *ū*.²⁶

The *Παίονες* (*Παιονία*) lived north of the Macedonians. The ethnic position of the Paeonians is not very clear. Some scholars (Krahe, Mayer) consider them to be Illyrians, while others (Dečev) think they were Thracians. In my opinion the Paeonians were probably of Phrygian origin²⁷ with a

²⁵ See Dečev 1960: 186-187; Haas 1957: 464; 1960a: 26-27; 1970: 316-318; Gusmani 1959: 835-836, esp. 44-45; Georgiev 1960b: 126-127. In Armenian there is a Phrygian component, but Armenian is not the direct descendant of Phrygian: it seems that Armenian is the descendant of Mysian.

²⁶ Cf. Mac. *γόδα* = Skt. *guda-m* 'entrails'.

²⁷ Cf. Strabo 7, fr. 38.

(late) Illyrian superstratum but also with a Mysian and Thracian superstratum and adstratum. Later they came under strong Macedonian influence.

The name of the principle Paeonian town, Ἀμυδών (*Iliad*) or Ἀβυδών (Strabo, Suid., St. Byz.), which was situated on the banks of the Axios River, comes from **ambh(i)-udōn* 'around the water'.

The following are place names in this region.

Βρυάων (Strabo), a town, from **bhru(w)-ŋ-*, cf. Gr. φρέαρ, -ατος 'well' from **bhrew-ŋ-*, gen. **bhru(w)-ŋ-*, G. *Brunnen* 'well'.

Astibus, now called *Štip*, probably from **ad-tībhos* (*dt* > *st*), cf. Mac. *ad*, Phryg. *ad-* = L. *ad* 'at' and Gr. ἄφος n. 'stagnant water, marsh'.

Scupi, Σκοῦπτοι, now called *Skopje*, from **skup-oy* pl., cf. Olcel. *skufr* 'Troddel, Quaste, Büschel', LG *schupp* 'Wetterdach', G. *Schopf* 'Scheune', Russ. *čup* 'Schopf' (Pokorny 1951-69: 956).

Stuberra, Στύβεσσα, Στύβησα, Στύ(η)βυσα, *Istubera* from **stubb-ero-*, see Pokorny 1951-69: 1034.

During the 2nd (and 3rd) millennium B. C. several tribes living in the central part of the Balkan Peninsula started migrating through (southern) Thrace into northwestern Asia Minor: Mysians, Dardanians, Mygdonians, Phrygians, Bottieians, and probably also Paeonians.

5.7. The Illyrian Region

In antiquity Illyria, together with some neighbouring regions mostly to the north, was a separate ethnic region, namely the Illyrian region. There is a great difference between *Illyria*, which was approximately contemporary Albania with some adjacent regions, and *Illyricum*, a Roman administrative term which designated approximately the territory of modern Yugoslavia and Albania.

The toponyms most typical of Illyricum are the following:²⁸

Δελμ- (*Δελμ-*) = Alb. *delmë* 'ram', cf. *Δελμ(η)ον πεδίων μηλόβοτον* (Strabo); *Δελμαία*, a derivative from the tribal name *Δελμῆται*, *Δελμάται*, now Dalmatia, Bosna, and Herzegovina, northern Montenegro up to Pannonia (to the south of the Drava River as far as the Drin River, to the east as far as the Drina River); *Δελμῆνον*, now *Duvno* in western Bosna; *Δάλμυτας* (Proc.), a place in Upper Mysia (near Rhemisiana, now called Bela Palanka); *Dalmata*, probably near Strumica (in Macedonia); *Dalmisium*, now called *Omiš*, on the banks of the Cetina River.

Δρεῖνος (*Δουρά*, *Drinus*), now called Drina River, between Bosna and Serbia: *Drinus* (*Drinon*, *Αἰῖλον*), now called Drin River in north Albania and Yugoslavia; *Drinasa*, a branch of the estuary of the Drin near Bojana; *Drynos*, a tributary to the Viosa River. The name is derived from **drino-* or **drū-no-*, a derivative of **dr-i-* or **dr-ū-* 'to run, to flow'.

Ἰάδρα, a town in Liburnia, now Croatian *Zadar*; *Iader* (*Iadro*) a stream near Salon(a); *Iader*, a tributary to the *Drinača* River in Bosna; *Iadro*, Alb. *Gjadri*, a tributary to the Drin. The name is explained through **yowdh-ro-*, cf. Mayer 1957-59: 2, 52.

Scard- from **scord-* (or **skrd-*) 'rocky, stoney, steep' (cf. Mayer 1957-59: 2, 307); *Scardona*, Σκάδων, a town in Liburnia, now Croatian *Skradin*; Σκαρδῶνα νῆσος, two islands between Istria and Dalmatia; *Škurda*, a rocky abyss and stream near Kotor (Ital. *Cattaro*); Σκάροδον, now called *Šar* Mountain near Skopje.

²⁸ See Jokl 1926; Krahe 1955; Mayer 1957-59; Russu 1957a; 1961; 1969.

Ulc- = Alb. *ulk*, *ujk* 'wolf': *Ulcinium*, now Alb. *Ulcini* in southern Illyria, *Ulcista* (*castra*) on the Danube, *Ulcirus* in Dalmatia.

The Illyrian region was not as well delineated and homogeneous from the linguistic point of view as the Daco-Mysian and Thracian regions.

Some scholars (Mayer, Krahe, etc.) consider, without sound reasons, a number of Greek, Macedonian, Daco-Mysian, etc., names to be Illyrian, for instance the following:

Ἀγροῖτοι, *Ἀγχυλῆ*, *Ἀθαμᾶνες*, *Αἰγύριοι*, *Αἰθίκες*, *Ἀναπός*, *Ἀντιγόχεια*, *Ἀντιπατορία*, *Ἀξίος* (Daco-Mysian), *Ἀπολλωνία*, *Ἀραχθός* (Gr. or Pel.), *Ἀργυροῖτοι*, *Ἀυλόν*, *Βέρμιον* (Mac.), *Βότον*, *Bora mons* (Mac.), *Βονθροιάς*, *Βράτιστα* (Slav.), *Γαληνός* (Thrac.), *Γορτυνία* (Mac.?, Phryg.?) *Γούρμιον*, *Δόρδανον* (Daco-Mys.), *Δαρδιάρα* (Thrac.), *Davus* (Daco-Mysian), *Δέλιον ὄρος*, *Διοράχιον*, *Ἐγχελέα*, *Ἐδέσσα* (Mac.), *Elaphites*, *Ἐποκύλλος* (Mac.), *Ζάραξ*, *Ἰεράκεια*, *Ἰντεροφρουτῖνοι* (Gr.-L.), *Καπέδουρον* (Celt.), *Κασσωποί*, *Castra* (L.), *Celadussae*, *Κεραῖνια*, *Κεραῖνοι*, *Κέρκυρα*, *Κέρκυρες*, *Confluentes* (L.), *Κόρραγος* (Mac.), *Quadrata* (L.), *Κύδοι*, *Lacus Felicis* (L.), *Μάργος* (Daco-Mys.), *Μάριος*, *Naissos* (Daco-Mys.), *Νέδα*, *Neviodunum* (Celt.), *Nymphalum*, *Ὀλίμπη*, *Ὀρβήλος* (Mac., Phryg.), *Ottolobus* (Mac.), *Ὀνενδένις* (Daco-Mys.), *Ὀφειέστης*, *Palaeste*, *Πανύσος* (?), *Παραναῖοι*, *Πάριος* (Daco-Mys.) = *Παριόζον*, *Πασσαρόν*, *Πελαγόνες* (?), *Πελαγῖται* (?), *Πινέστοι*, *Πήμιον* (Gr., Mac.), *Pincus* (Daco-Mys.), *Πινύεια* (*Πινοῖσσα*), *Πρασάς* (Paeonian), *Πηλόν* (Mac., Gr.), *Remesiana* (Daco-Mys.), *Σαβύλωνθος* (Pel. or Thrac.), *Σαϊδήνοισι* (Daco-Mys.), *Σαίησι* (Paeonian), *Σελλοί*, *Sigidunum* (Celt.), *Σούβας*, *Στυμφαῖοι*, *Τενταμίδης* (Mac., Pel.?), *Timachus* (Daco-Mys., Thrac.), *Τημίνα*, *Τόμαρος* (see above), *Τριβαλλοί* (Daco-Mys.), *Τυμφαῖοι*, *Τύμφη ὄρος*, *Turres* (L.), *Υόκανα* (Mac. or Daco-Mys.), *Φαλακρόν*, *Φάλακρος*, *Φαλῆνος*, *Φάμιος*, *Φονίκη*, *Χάονες*, *Ὠρικός*.

Actually we know very little about the Illyrian language: we only have three or four glosses:

Δενάδα οἱ *Σάτ(υρ)οι* (v. l. *σοι*), *παρὰ Ἰλλυριῶν*.

ῥινός 'mist': οἱ δὲ λέγουσιν Ἰλλυριοὺς ῥινὸν λέγειν τὴν ἀχλύν (Eust., 12th century A. D.); it is related to Albanian *re*, dial. (Gegan) *rê* f. 'cloud'.

sabaia (Amm. Marc.; 4th century A. D.), *sabaium* (Hieronimus) 'a kind of beer', cf. Skt. *sabar* 'milk, juice, nectar'.

sybina 'hunting spear' (Ennius, Paulus ex Festo) but it could be Macedonian.

These few glosses do not allow us to determine the position of Illyrian among the other IE languages.

The study of the ancient onomastics of Illyria *stricto sensu*, i. e., approximately the territory of the modern Albania, makes it possible to establish here two types of proper names.

(1) Names which preserve the IE vowel *o*, e.g.:

(a) Toponyms: *Alkomenai*, *Bolouros*, *Codrio(ne)*, *Dibolia*, *Diocl(e)a* or *Docl(e)a*, *Domavia*, *Loranum*, *Oidantion*, *Olbia* (Gr.?), *Oneum* (*Onaion*), *Orgomenai*, *Orgēssos*, *Scodra*, (*Tomaros*).

(b) Anthroponyms: *Kopeina*, *Longarus*, *Monunios*, *Morkos*.

(c) Ethnonyms: *Eordaioi*, *Onastini*.

(2) Names in which the IE vowel *o* is changed into *a*, e.g.:

(a) Toponyms: *Barbanna*, *Clausal(a)*, *Dimallum* (*Dimalē*), *Maluntum*, *Marusio*, *Naron*, *Narona*, *Panyasos*, *Scardon*.

(b) Anthroponyms: *Bardylis*, *Bardeias*, *Teutana*.

(c) Ethnonyms: *Narensii*, *Parthini*, *Taulantii* (*Daulantion ethnos*).

Therefore it seems that in Illyria we must distinguish two ethnic layers.

Daco-Mysians had penetrated and settled in Illyria, east Dalmatia, and east Pannonia at a very early period (before the 1st millennium B. C. and later at different intervals). Furthermore, there were also invasions from the northwest (cf. Ἰλλυριῶν Ἐνετοί, Hdt.), and there were Celtic invasions. Altogether this explains the existence of two different opinions on the historical phonology of Illyrian; some scholars consider Illyrian to be a *centum* language (theory A: Hirt, Krahe, Barić, Pokorny, Popović, etc.), while others consider it to be a *satəm* language with "remnants from *centum*" (theory B: Kretschmer, Jokl, Ribezzo, Pisani, Mayer, etc.),²⁹ The most typical features of the historical phonology of Illyrian are shown in Table 12.

Table 12
Typical Features of Illyrian

Indo-European	Illyrian	
	A	B
<i>o</i>	<i>o, a</i> ³⁰	<i>a</i>
<i>ō</i>		<i>o, u</i>
<i>ū</i>		<i>oi</i>
<i>ey</i>		<i>i</i>
<i>oy</i>	<i>oi, ai</i>	<i>ai, e (a)</i>
<i>aw</i>	<i>au</i>	<i>au, a, o</i>
<i>ew</i>	<i>eu</i>	<i>eu, e</i>
<i>ow</i>	<i>ou, au</i>	<i>au</i>
<i>ɾ</i>	<i>or</i>	<i>ri, (ir, ur)</i>
<i>ŋ, ɲ</i>	<i>an, am</i>	<i>a, (an, am)</i>
<i>k'; g', g'h</i>	<i>k; g</i>	<i>s (š); z (ž)</i>
<i>kʷ; gʷ, gʷh</i>	<i>p; b</i>	<i>k; g</i>

The scarcity of material on Illyrian makes it impossible for us to solve the problem of its position within the IE family. Krahe erroneously considers some of the elements found in Venetic, Daco-Mysian, Greek, and other IE languages to be Illyrian. The hypothesis that there were Illyrians as far north as the Baltic Sea (Much, Cossina, Vasmer, Pokorny, Krahe)³¹ is incorrect.³² Jokl (1926), Kretschmer (1940-43: 99-100), Mayer (1952: 54-46), and others consider Illyrian to be closely related to Thracian. Detschew (1957: V-VI) showed that some of the names from the central part of the Balkan Peninsula which are considered to be Illyrian are actually Thracian (i. e., Daco-Mysian); the Illyrians superimposed themselves on Daco-Mysian, Proto-Phrygian, and Thracian substrata. Krahe's assumptions about the characteristic linguistic features of Illyrian are on the whole acceptable. Illyrian belongs to the Western IE group and is closely related to Venetic (Krahe), but it has features in common with Phrygian, Macedo-

²⁹ See Popović 1960a: 64-65; Ognenova (1958) proved that the inscription on the bronze ring from Kalja Balmaces near Skutari, which was considered to be Illyrian (see for instance Krahe 1955: 12), is of late Greek origin.

³⁰ See Krahe 1957a.

³¹ See Krahe 1954: 8.

³² See Kretschmer 1940-43: 99-100; Kronasser 1962. Actually Krahe, towards the end of his life, changed his mind about his thesis to great extent, cf. 1957b: 103-104.

nian, and Greek and it was in turn influenced by the Daco-Mysian superstratum. Illyrian can be defined to a certain degree as an intermediate language between the western and the central groups.

5.8. *The Western Part of the Balkan Peninsula*

As far as the western part of the Peninsula is concerned, linguistic data from antiquity are not sufficient to more clearly define the ethnic situation which existed in remote times.

Krahe's Illyrian theory, which was dominant from 1930 to 1950, has collapsed. According to Krahe, the Illyrians lived throughout the entire western part of the Peninsula and a large part of Central Europe, Italy, Greece, and even Asia Minor. This assumption was based on the supposition that the Venetians were Illyrians and that a number of place names in central Europe were of Illyrian origin. But after it was proved that the language of the Venetic inscriptions was closely related to Latin and that Venetic was not Illyrian, this theory was dropped. Furthermore, it is now also clear that the supposedly Illyrian toponyms in central Europe could not belong to this language.³³

Katičić's (1964b; 1964c; 1964d) assumption about the ethnic situation in the western part of the Peninsula is quite probable.³⁴ In his opinion three or four ethnic regions can be distinguished: Illyria, Dalmatia, (southern) Pannonia, and Liburnia (including Istria). The principal tribes or peoples living in this territory were the Illyrians, Dalmatians, and Pannonians, the latter two being closely related. The Liburnians and the Istrians inhabited only a small territory in the most western part of the Peninsula. Their language was closely related to Venetic (see section 10.2.4).

Thus before the Celtic invasion the principal peoples in the western part of the Balkan Peninsula were the following:

(1) The Illyrians, who lived in what is now Albania and some adjacent regions: these are the *Illyrii proprie dicti* (Pliny).

(2) The Dalmatians in Dalmatia and the Pannonians, about whom very little is known.

(3) The Liburnians and the Istrians, who were closely related to the Venetians.

The languages of all these peoples were of IE origin. Illyrian and Dalmato-Pannonian were probably closely related. But Illyrian, Daco-Mysian, and Thracian were different IE languages.

5.9. *Thracian and Illyrian*

The view that Thracian and Illyrian were closely related to each other is widespread: some scholars even use the term Thraco-Illyrian. This term is used by Mladenov (1918: 80; 1928; 1936: 58) and by Jokl (1924: 92; 1926: 45; "a close relationship between Illyrians and Thracians..." (1929: 278). Brandenstein (1936b: 413) writes: "Thracian shows close relations with

³³ See Kronasser 1962; Georgiev 1968a.

³⁴ See also Lochner-Hötenbach 1970.

Illyrian"; Russu (1961: 80) writes: "The relationship between Illyrian and Thracian is clear and evident". I myself, a disciple of Mladenov and Jokl, also used the term "Thraco-Illyrian" about 40 years ago.

But the investigations carried out during the last 30 years of the ancient languages on the Balkan Peninsula, and especially the clarification of the character of the Thracian language made it possible to solve the problem of the relationships between these two languages. In spite of the fact that they were related, both being of IE origin, Thracian and Illyrian are entirely different: these two languages differ more from each other than, for instance, Slavic and Baltic.

In defending this point of view I will provide evidence from outside the field of etymology because the evidence based on etymological considerations could be contested due to its subjective nature. For this reason I will present data which refer only to the geographical distribution of the proper names or to their formation. Being objective in nature, these data give definite proof of the fact that there was a great difference between Thracian and Illyrian. The evidence is as follows.

(1) The ancient toponymy of the eastern part of the Balkan Peninsula (Thrace) differs fundamentally from that of the western part. The place names which are most frequently found and which are most typical in the Thracian region are usually the **dithematic** names formed by the words *para* (about 50), *bria* (about 15), *diza* (11), *kella* (6). Such place names are lacking in the Illyrian region. The most typical place names in Illyrian are **monothematic** formed by the words *delm-* (4), *scard-* (4), *ulc-* (3). Such toponyms are lacking in the eastern part of the Peninsula.

There are about 50 place names of the type *Bessapara*, *Drusipara*, *Sauzupara*, *Scaptopara*, etc. These names are found in Thrace. The western boundary of their distribution follows approximately the line formed by the Timok and Struma Rivers: the most western settlements were *Scaripara*, *Chesdupara*, *Dardapara*, *Priscupera*, and *Tranupara*. There are about 15 place names of the type *Mesembria*, *Scelabria*, *Sombria*, etc. These names are found only in Thrace. The most western settlements were *Bolbabria*, *Combrea*, and *Salambria* (?). There are 11 place names of the type *Orudisza*, *Tarpodizos*, *Tyrodiza*: these names are found in eastern Thrace. There are six place names of the type *Cellae*, *Saldocela*, *Syracella*, three of which (*Arganocili*? *Cella*, *Myscella*) are found not far from the boundary formed by the Timok and Struma Rivers.

Therefore, the line formed by the Timok and Struma Rivers was approximately the western boundary of distribution of Thracian place names.

(2) The hydronymy in the east is completely different from that in the west. The Illyrian river names, which are most frequently met, are *Drinus*, *Iader*; these names are not found in Thrace. In Thrace there are practically no correspondences to any other Illyrian hydronyms such as *Alor*, *Aous*, *Arion*, *Ardaxanos*, *Bevus*, *Clausal*, *Dizeros*, *Epillicus*, *Genusus*, *Iasae*, *Naro*, *Oineus*, *Rizon*, *Salangon*, *Savus*, *Tilurus*, *Titus*. Similarly, Thracian hydronyms such as *Arisbos*, *Artanes*, *Artakos*, *Artiskos*, *Athrys*, *Atlas*, *Auras*, *Biblos*, *Iuras*, *Kebros*, *Kontadesdos*, *Kompsatos*, *Lis(s)os*, *Orosines*, *Oskios-Oiskos*, *Panax*, *Panisos*, *Salmydes(s)os*, *Strymon*, *Tearus*, *Tonzus*, *Utus*, *Zurta*, *Zyrae* are unknown in the west.

Of course, there are some toponyms which are found both in the east and in the west, for instance:

Thrace	Illyria (Illyricum)
<i>Almus</i> (river, town)	<i>Almus mons</i> (mountain)
<i>Arzos, Arsus</i> (river, town)	<i>Arsia</i> (river), <i>Arsa</i> (town)
<i>Asamus</i> (river)	<i>Asanum</i> (town)
<i>Hebros</i> (river)	<i>Hebros</i> (river)
<i>Nestos</i> (river)	<i>Nestos</i> (river)
<i>Serme, Syrmus</i> (river)	<i>Sirmium, Sermium</i> (town)

This is quite natural since Thracian and Illyrian are both IE languages. But there are so few of these names that their limited number can be used as additional evidence for the difference between these languages.

(3) Thracian and Illyrian anthroponyms are completely different. The most frequent and most typical Thracian anthroponyms are not found in the western part of the Peninsula, for instance: *Aulos* (*Aulouzelmis, Auloukenthos, Auloumenes, Aulouporis*, very often), *Byzos, Dorzas* (*Dorzenthos, Geigon, Gilpyros, Karzas* (*Cersus*), *Kenthos* (*Mestikenthos, Reboukenthos, Ketrezeris, Ketriporis, Kozeilas* (*Kozeikenthos, Kozinthos*), *Mestas, Palbes, Portis* (*Daleporis, Diliporis*), *Rheskos* (*Reskotorme, Rheskouporis, Rhaskyporis*, often), *Seuthes* (very often), *Spartacus, Teres*, etc.

Similarly, the most frequent and most typical Illyrian anthroponyms are not found in Thrace, for instance: *Acris* (*Acrabanus*), *Aetor, Andes, Aplo* (-a, -is; very often), *Audarus, B(a)edarus, Baezus, Bardus* (*Bardylis, Bardibalus*), *Bato* (very often), *Beuzas, Blaedarus, Blaesius, Blodius, Ceunus, Das(s)ius* (*Dazius, Dasa(s), -z-*; most frequently), *Epicadus, Gentius* (very often), *Grabos, Lavo, Lykkeius, Masus, Oplus, Pladomenus* (often), *Plares, Pleuratos, Plator* (often), *Scerdis* (*Scerdilaidos*), *Teuta* (*Teuticus, Teutomus*), *Ulcirus, Verzo* (*Varzo*), etc.

(4) The formation of the Illyrian anthroponyms is basically different from the formation of the Thracian anthroponyms. In the Thracian anthroponyms the dithematic names predominate (for instance, *Aulo-zenes, Mestikenthos, Resku-turme, Roimē-talkas*, etc.), while the Illyrian personal names are almost exclusively **monothematic** (for instance, *Aetor, Aplo, Ceunus, Plator*, etc.). This fact is of special importance since it indicates an archaic specific feature of the IE languages.

Fick and Bechtel's theory of the formation of personal names in the IE languages was widely recognised for a long time. According to this theory, the original form of the anthroponyms in IE was dithematic, for instance *Δημο-σθένης*. This type is well preserved in Indo-Iranian, Greek, and Germanic, while in Latin (and Lithuanian) it had disappeared. This theory is erroneous. It is based on an incorrect conception of the evolution of human society.

The dithematic anthroponyms developed during a comparatively late period in evolution of the primitive society of the Greeks, Indo-Iranians, Germanics, etc., they developed independently on the basis of dithematic common nouns and adjectives, as for instance *δορυ-φόρος* 'spear-bearing' > *Δορυφόρος* (anthroponym), *μεγα-σθενής* 'of great strength' > *Μεγασθένης* (anthroponym), *πολύ-κλειτος* 'far famed' > *Πολύκλειτος* (anthroponym), etc.

The majority of the monothematic anthroponyms originate from much more ancient times. These are primarily denominations of animals, plants, and different objects used as totem names.

One of the most ancient forms of religion is **totemism**, the belief in totems, i. e., an animal, plant or some other object which is considered to be the progenitor of the tribe and worshiped as such. The use of totem names as personal names is more ancient than the use of dithematic personal names. Greek and Latin offer many examples of totem names: Gr. **Αρκτος* 'bear', *Δελφῖνος* 'dolphin', **Εποψ* 'hoopoe', *Ἰέραξ* 'hawk', *Κόραξ* 'raven', *Κρίος* 'ram', *Λέων* 'lion', *Λύκος* 'wolf', *Νέβρος* 'young deer', *Πέριδος* 'partridge', *Πῶλος* 'stallion', *Ταῦρος* 'bull', etc.; L. *Lūcius* = *lūcius* 'pike', *Gālus* = *gaius* 'jay', *Titus* = *titus* 'dove',³⁵ *Ursus* 'bear', etc.

Thus Latin, Illyrian, Lithuanian have not lost the most ancient personal names from proto-IE but, on the contrary, they preserved the original situation.³⁶

Illyrian offers many examples of this ancient type of personal names, for instance:

Artus = Gr. **Αρκτος*, *ἄρκτος* 'bear'.

Dasa(s), *Das(s)ius*, *Dazius* = Alb. *dash* 'ram', the personal name *Dash*, cf. Gr. *Κρίος* 'ram', *Κάπρος* 'wild boar', *Ἀμνός* 'lamb' etc., cf. Rosetti 1962: 2, 59.

Menda 'mare', cf. Pokorny 1951-69: 729.

Nebris, cf. Gr. *νεβρός* 'young deer'.

Taur-, cf. L. *taurus* 'bull'.

Ulcudius, cf. Alb. *ulk*, *ujk* 'wolf'.

Verzo, cf. L. *Verrēs* = *verrēs* 'hog' from IE **wers-*.

Therefore, as far as the formation of personal names is concerned, Illyrian as well as Latin preserved an archaic feature while Thracian introduced an innovation which was developed also in Indo-Iranian and Greek.

The facts given above are **objective in character** because they are taken from the **geographical distribution** of the linguistic material and from its formation and not from the etymology, which sometimes may be subjective. This is reliable evidence that Thracian and Illyrian are not closely related: the difference between these two IE languages is approximately the same as the difference between Iranian and Latin.

5.10. The Origin of the Place Names (and Appellatives) Formed by the Suffixes -*νδ/νδ-* and -*σ(σ)/τι-*

The formations with the suffixes -*νδ/νδ-* and -*σ(σ)/τι-* are of great importance for the Aegean region and Asia Minor and for this reason they must be discussed in detail.³⁷

³⁵ Cf. Devoto 1929: 259-260.

³⁶ Cf. Pulgram 1947; Georgiev 1957b: 59-61; Bolelli and Campanile 1961.

³⁷ No consideration is given here to the suffixes and the pseudo-suffixes -*λ-* (*Καρθυμύλη*, *Κυάχαλος*, etc.), -*μ-* (*Κίσημος*, *Πέσγαμος*, *Σαλαμῖς*, etc.), -*ν-* (*Θεναί*, *Τροαζήνη*, *Γόστυν*, etc.), -*μν-* (*Κάλμυνα*, *Δίζμυνα*, etc.), -*ρ-* (*Δοήρος*, *Τένταρον*, *Ώλιερος*), -*ρν-* (*Κάρονος*, *Λέονα*, etc.) because they have never had any importance as proof since these formations appear in all

5.10.1. The Suffix *-vθ-*

The suffix *-vθ-* is of IE pre-Greek (Pelasgian) origin: it originates by the consonant shift (IE *t* > Pel. *th*) from *-nt-* and corresponds exactly to Hitt. *-nt-* (*-nd-*), Gr. *-vτ-*, etc. In the majority of languages from Asia Minor (Phrygian, Armenian, Hittite, Lycian, Lydian, Carian) the consonant cluster *nt* shifted into *nd*: for this reason this suffix appears in Asia Minor in the form *-vθ-*. The suffix *-vθ-* can be of different origin, as is *-nt-* in Greek, Hittite, Sanskrit, etc., as for instance: (a) *-n-t(o)-*, root or *n*-stem + the suffix *-t(o)-*: Gr. *ἐν-τός*, Hitt. *gemant-* - Skt. *heman-ta-* 'winter'; (b) *-went(-ment)-*: Hitt. *Wiyana-wanda* = Gr. *Οἰνοῦς*, *-οὔντος*, Hitt. *samankur-want-* 'bearded' from *zamangur* 'beard', *nakumant-* 'naked', *kisduwant-* 'hungry' from *kast-* 'hunger', Gr. *Ὀπίεις*, *-εντος*, *Πέτρως*, *-αντος*, *Χαρίεις*, *-εντος*, etc.; (c) *-e/ont-* (participle): Gr. *Πυρογλεγάων*, *-οντος*, *Εἰλισσών*, *-όντος*, *Λάδων*, *-οντος*, etc.; (d) *-ēnt*, *-ηnt-*, a diminutive suffix: OBG *tele*, *-ete* 'calf'; Hitt. *-(a)nt-*: *parn-ant-* 'a small house' from *parn-* 'house';³⁸ (e) the suffix *-nt-* derived from (a) or (b): Hitt. *peruna-nt-* 'rocky' from **peruna-want-* (?), a derivative of *peruna-* 'rock'; etc.³⁹

Undoubtedly the explanation of proper names whose meaning is not exactly known and whose original form is not always well recorded is very difficult. Thus one should be very careful when offering an explanation for proper names. Nevertheless, the investigations in this field in recent years have produced decisive results. Below are some examples.

(a) *-vθ-* from *-n-t(o)-*, root or *n*-stem + the suffix *-t(o)-*:

Βρεῖνθη from **b^hren-tā*: Mess. *βρένδον* (*vθ* < *nt*) 'ἐλαφον' (Hesych.), Swed. *brind(e)* 'deer' from **b^hren-tō-s*, Mess. *Βρεντέσιον* = *Brundisium*, a place name, Venetic *Brinta*, a river name.

Ὀρούμανθος (with *E-* after *εὐρύς* 'wide'), Myc. *orumato* = **Ορούμα(v)θο(ς)* with dissimilation *o—u* < *u—u* from **uru-monto-* 'wide' or 'large mountain', cf. Skt. *urū-* 'big', Luw., Hier. Luw. *ura-* 'big' and L. *mons*, *-tis* (more ancient **mon-to-s*) 'mountain', or **Ορούμα(v)θο(ς)* with assimilation *ω—n* > *m—n* = Hitt. *Uruwandas*.

Κύνθος 'top of a mountain' with *-vθ-* from *lt⁴⁰* = Skt. *kūṭa-m* 'summit, peak, highest point, top' from **k^hh-to-*: *Βερέ-κυνθος* 'having tops' or 'white top', **Αρά-κυνθος* from **Αρα[κα]-κυνθος*, cf. *ἄρακος* 'ἰέραξ', *Ζά-κυνθος* with *ζα-* from *δα*?, *Πήσ-κυνθος* 'royal top'.

IE languages. The Luwian (and Hittite) origin of the suffix *-mn-* in the IE languages from ancient Asia Minor was proved by Laroche (1957-67: 55, 170-171). This suffix is neither of Hittite nor of Hurrian origin. The IE origin of the suffix *-εῦς* (discussed in superfluous details by Schachermeyr 1954: 1518-1519) is indisputable, see Georgiev 1960c. For the Hittite-Luwian suffixes *-nd-* and *-ss-* see sections 6.2.1-2.

³⁸ Cf. the Slavic suffix *-et-* for forming diminutives, see Machek 1949; Trubačev 1959: 191. On the Hittite diminutive suffix *-ant/d-* see Georgiev 1965a and 1968c.

³⁹ Schachermeyr's objection (1954: 1540-1541), in which he claims that these formations are not met as frequently in any other IE language and that they must have originated from one suffix only, is not tenable. These derivatives are equally frequent in Greek, Sanskrit, Hittite, etc., but they appear there in another phonetic form since the phonetic laws are different in the different IE languages. Furthermore, it is clear that *Βρεῖνθη*, *Κύνθος* cannot be formed in the same way as *Λαβύρινθος*, *Σάμινθος*, *Σαλύνθιος*, etc., as for instance Gr. *Πόντος* (= *πόντος*), *Φηγ-οῦντι-* (from *-οῦεντι-*), and *Εἰλισσώντι-* (from IE *-ont-*).

⁴⁰ Cf. Gr. *Ψύλλας* > *Ψυντίλας*, *βέλτιστος* > *βέντιστος*, etc., *κέντο* from *κείνομαι*, see Schwyzler 1934-39: 213.

Thrac. *Πέρωνθος*, *Πείρωνθος* (-εϝ-, -εϝ- < -έρω-) — Skt. *parvata* 'mountain' from **perwā-to-*, cf. Hitt. *peruna-nt-* 'rocky' from *peruna-s* 'rock' = Bulg. (pre-Slavic) *Perin* (> *Pirin*), a rocky mountain in southwest Bulgaria, from **perūno-s*.

(b) -νθ- (-νθ-, -ννθ-, -ανθ-) from -went-, -wnt-, -wont- (Gr. *Φηγούς*, -οῦντος from *φηγός* 'oak', Hitt. *Wiyanaawanda* = Gr. *Οἰνοῦς*, -οῦντος):

Κόρινθος, a town situated near a mountain (cf. **Ακρο-κόρινθος*), from **g^wri-went-* = Hitt. *Kuriwanda*, a mountain in southwestern Asia Minor, from **g^wri-*, cf. Skt. *giri-* 'hill, mountain'.

Λαβύρινθος from **lawr-went-* 'stony' = *λαβύρινθος* 'labyrinth' (literally 'stone building') from **lāw^r* 'stone', cf. Luw. *lawar-* 'to break', Gr. *λά(F)ας* 'stone'.

Πύρανθος from *(s)*pūro-went-* (or -wont-, -ā-went-), cf. Gr. (σ)πυρός 'grain, wheat', πολύ-πυρος 'rich in corn', the epithet of a locality, cf. Hitt. *Puranda*, a town in Pisidia, from **Purawanda* with *awa* > *a*, cf. Hitt. *italawaz* > *italaz* (as in L.).

(c) -νθ- (-νθ-, -ννθ-), a diminutive suffix from -(e)nt-, -nt- (cf. Hom. *μίνυνθα* 'a short time' from **μυνν-* 'small'):

Σάμωνθος from *σάμος* 'height', a derivative of **twa-mo-*, cf. L. *tama* 'tumour' from **twa-mā*, *tumulus* 'hill, height; tomb' from **tu-m-el-os*.

Σύρινθος, cf. *Σύρος* from **sūro-* 'salty, bitter'.

Σαβύλινθος (Thrac.), a personal name, the diminutive of *Σαβος*. The diminutive suffix -νλ-νθ- is a combination of two diminutive suffixes -ul-ent- and corresponds to the Slavic (Bulgarian) diminutive suffix in words such as *miš-le* 'little mouse' from **mus-ul-ěnt-*, *nos-le* 'small nose' from **nas-ul-ěnt-*.

Σαλύνθιος (Thrac.), a personal name formed with the diminutive suffix -(ν)θ-, probably from **solw-nt-* 'Σω-ίλος', see *Σαβύλινθος*.

Αἰγινθος, ὄνομα κέριον (Suid.), a personal name (= Gr. *Αἰγ-ίλος*) formed with a diminutive suffix borrowed in Greek, cf. Gr. *Αἰγίς*, *Αἰγί-κλῆς*, *Αἰγιο-θος*, *Μνάσι-ωγος*, etc.

The diminutive IE suffix -(e)nt-, -nt- is typical of Thracian (-ενθ- > -νθ- from -ent-) and of Slavic (OBG -ε-, -ετε), cf. for instance Thrac. *Λορξ-ενθης* from *Λορξας* < IE **d^hrs-*, cf. Gr. *Θέρσας*, *Θράσους*, *Θρασίας*; Thrac. *Κοξ-ινθης* from *Κοξας*.

(d) -νθ- (-νθ-, -ανθ-, -ννθ-) from -(e/o)nt-, -nt- (participles): *Κόσκυνθος* (Lycophr.), the name of a river, from *(s)*kō(k)-sk-nt-* 'jumping', cf. the Bulgarian river names *Skakavec*, *Skakaja* from **skōk-*, *Skoka* from **skok-* 'to jump', the Thracian place name *Σκασκο-παρά*.⁴¹

⁴¹ Schachermeyr (1954; 1955) erroneously defines many toponyms with -νθ- as pre-Greek, though their Greek origin is doubtless: **Ακωνθος* = *ἀκωνθος*, a plant; **Ολινθος* = *ὄλινθος* 'fruit of the wild fig'; **Υάκινθος* = *ὑάκινθος* 'hyacinth'; **Φάλαςθος* = *φάλαςθος* 'grey'; *Κόρινθος* and *Ται-κόρινθος* from *κόρινθος*, -νθος 'helmet'; *Προβάλιθος* from **Προβά[το]-ιθος* (the last two names are found written with -νθ- due to the influence of the place names with this suffix); *Κορβέντα* n. pl., a dialect form from **Κορο(F)εντα*, cf. *κόρος* m. 'rubbish, litter'.

5.10.2. The Suffix $-(\sigma)/-ττ-$

With regard to the origin of the Aegean toponyms in $-(\sigma)-$ it must be pointed out that in a certain number of these names $-(\sigma)-$ alternates with $-ττ-$, according to the phonematic laws of Greek. Thus $Υμητός$, a mountain in Attica, appears in Herodotus (VI, 137) in its Ionian form $Υμησός$, as for instance Att. $κρείττων$, $μέλιττα$, $τέτταρες$ and Ion. $κρείσσων$, $μέλισσα$, $τέσσαρες$. Usually $-ττ-$ is typical of Attic, Boeotian, Cretan (and is seldom found in the other dialects), while $-(\sigma)-$ is found in the other dialects.⁴² This is a typical feature of this suffix; whoever tries to explain it, must find an original form from which $-(\sigma)/ττ-$ would develop regularly according to the phonematic laws of the Greek dialects. For this reason Kretschmer's attempt to explain this suffix as Caucasian or Hattic was not successful: if the original form of the suffix were $-s(s)-$, then from $-s(s)-$ it would have been impossible to obtain $-ττ-$ in Greek.

On the whole, the place names in $-ττος$ (which can alternate with $-σσος$) are of Greek origin because, as we will see below, their stems, their formation, and their phonematic peculiarity can be correctly explained from the point of view of the Greek language. This fact must be strongly stressed because, under the influence of Kretschmer's thesis, there are scholars even now who consider them to be pre-Greek.⁴³ In Asia Minor there are no place names in $-ττος$; the $-ss-$ in Hittite-Luwian originates from $-sy-$ which cannot give $-ττ-$.⁴⁴

In his attempt to salvage something of his pre-IE theory Kretschmer discussed this suffix in several papers written after 1940, and specifically in *Glotta* (1953, especially 168-169). Kretschmer's attempt to explain these place names by using the Hattic and Caucasian languages was unsuccessful: his assumption, for instance, that the Attic place name $Κηττός$ can be explained by the Lakian (a Caucasian language) word $k'ea$ 'hand' (p. 168) is completely groundless. As we shall see below, $Κηττός$ has a sound Greek (IE) etymology.

The suffix $-(\sigma)/ττ-$ is not homogeneous: formations of varied origin have merged in it.

(1) The suffix $-yo-$. In IE there is a denominative suffix $-(i)yo-$ which is used to form adjectives derived from nouns. It appears in two forms: $-iyo-$ and $-yo-$. In (classical) Greek its usual form was $-ιο-$ from $-iyo-$; $-yo-$ appears very rarely.⁴⁵ But in the Mycenaean inscriptions there are examples such as $aiza$ from $*aīγ-īz$, the Attic correspondence of which is $αἰγέζ$ f. from $αἴγρεος$ 'of a goat': this shows that the archaic form of this suffix in Greek (at least in some dialects) is $-yo-$. This suffix may be of Greek or Pelasgian origin and the origin of the names in question is defined through the etymology of their stems.

(a) $-k-yo-$, a derivative of the k -stems:

$Κηττοί$, an Attic demos (Lysias, D. Sic., Suid., inscriptions), $Κηττός$ (Phot., inscriptions). Contrary to Kretschmer's improbable supposition

⁴² Cf. Schwyzler 1934-39: 317-318.

⁴³ Cf., e. g., Chadwick 1969.

⁴⁴ The phonetic value of the letter which occurs in some early Ionian inscriptions and which is notated as T is not known, cf. Schwyzler 1934-39: 318.

⁴⁵ Cf. Brugmann 1897-1916: 2, 1, 182-184; Schwyzler 1934-39: 465-466, 471; Georgiev 1941: 193.

which was mentioned above, the name can be explained as Greek, derived from κήξ (gen. κηκός) 'a sea-bird', perhaps 'sea-swallow': *kḗwāk-yo- > *κηκ-ιο- > Κηκτο- (scil. δῆμιος, τόπος, etc.). The plural Κηκτοί may be explained as being influenced by place names in the plural, as for instance Φιλᾶδαι, Βουτᾶδαι, Ἰωρίδαι. But it can also be assumed that Κηκτοί initially was a tribal name in which the totem κήξ is hidden.

Σφηητός, an Attic demos (Ar. and Isaeus), Σφηητοί (*Et. M*) comes from *σφηκ-ιο-, a derivative of σφήξ (gen. σφηκός) 'wasp'. The explanation is the same as for Κηκτός, -οί from κήξ. The ancient Greeks explained the name by the fact that the inhabitants (Σφήητιοι) were considered to be ὀξεῖς or πικροί, i. e., σφήκες 'wasps'. Σφηητοί may also be explained as a derivative of the tribal name Σφήηκες = σφήηκες 'wasps'; the tribe Σφήηκες (a totem name) is attested on the island of Euboea (St. Byz.).

*Σπατίος a place name in Aetolia (cf. Kretschmer 1934a: 3 and 1935: 64) is reconstructed from the ethnicon Σπάτιος (in an inscription from Aetolia). The name is identical with Σφηητός, cf. Σπάτιος = Att. Σφήητιος; σφ- > σπ- is a dialect change (Locridan-Aetolian).

*Ερματός is reconstructed on the basis of the ethnicon Ερματίος (in inscriptions from Aetolia). The name is derived from ἔρμακες 'αἱ ἱφάλοι πέτραι' ('rocks') ἢ αἵμασι (‘fence; stone wall’; Hesych.): *έρμακ-ιο- > Ερματτο-.

Πήδισος, a town in Messenia (Strabo, Ptol., Paus.), with η = ι from *πίδακ-ιο-, a derivative of πίδαξ, -ακος 'spring', cf. Πιδασα, a town in Caria (?). Μολοσσός (-τός) — Lith. mūlkis 'imbecile, foolish', see section 5.4.

The suffix -āk-yo- was formed in this way and it has exact correspondences in the Slavic languages:

Γ'αργητός, cf. γ'άργα 'black poplar'.

Ἄρδητός, cf. ἄρδης 'point of a spear'.

Περνασσός, cf. πέρνιος 'holm-oak'.

The following place names may be of Pelasgian or Greek origin.

(b) -(n)t-yo-, a derivative of the -(n)t-stems:

Λικαβατός (-ητός) 'Jahres-berg' from λικάβας, -αντος 'year', cf. Curtius 1858-62: 2, 666; Fick 1896-97: 273; von Blumenthal 1937: 157.

Υμητός (-ος, -ίτη, -ησός) from ὕμα, -ατος n. 'rain' (erroneously Atticized or ατ > ᾱτ > ητ).

Υητός from ὕντες or Ὑάντω, a tribal name.

Πριάσος, Πριάσός from *Πριωντ-ιο- and *Πριωντ-ιο-, a derivative of Priantae, a tribal name.

Βολισ(σ)ός from βόλιον 'cow dung'.

Ἐρεσ(σ)ός from ἐρέτης 'oarsman'.

Ἀμικσσα, cf. Ἀμικτος.

Ἀργισσα (with ι < η) from ἀργής, -ῆτος 'bright, gleaming', see section 5.4.

Τύρισσι, cf. τυρίτης 'type of pie', which is derived from τυρός 'cheese'.

Κολλ(λ)υτ(ε)ός, cf. κολυντέα, a kind of plant (tree).

Ἀμβροσ(σ)ος, a retroformation from Ἀμβρόσιος, a derivative of ἄμ-βρω-αις = Att. ἀνά-βρωις from ἀνα-βρόω 'to spout out'.

Στυλιεντός (-ητος; η = υ = ι) from *στυ-παλ(ε)ν-τής, cf. σὺς 'swine' and πωλέω 'to lure'.

Πάμισος (-σός), a retroformation from Παμίσιος = Myc. qamisiyo, a derivative of *(s)k^wām-itā, cf. L. squāma 'scale'; for the formation cf. Ἀμμι-ίτης, the name of a river, from ἄμμιος 'sand'.

Κνωσ(σ)ός was previously called *Καίρατος* (cf. Call. and schol., Strabo, Eust., D. Per., Hesych.). *Καίρατος* is = Skt. *kevaṭa-h* 'ditch, hole' from **kaywṛto-s*. Thus *Κνωσ(σ)ός* means 'ditch, hole' and originated from PIE **knex-ti-* or **knex-t-yo-*, cf. Skt. *khata-h-* (**kṛx-tó-*) m. 'ditch, dug-out spot', Av. *kanta-*, Sogdian *kntc*, a participle from Skt. *khanati*, Iran. *kan-* 'to dig' from **ke/onx-*. This name may be Greek or Pelasgian: Gr. **Κνωτός* or **Κνωσός* (Pel. -νθ-), *Κνώσιος*, *Κνώσιοι*. In this case *Κνωσός* has -σ- under the influence of the forms *Κνώσιοι*, *Κνώσιος*.

Τευμησ(σ)ός, *Τεύμησος*, *Τευμσόν*, a mountain and town in Boeotia, is a retroformation from *Τευμήσιος λόφος* which in turn is derived from the name of the Boeotian *Τεύμης* River. *Τεύμης* (m., like *ποταμός* m.) is a retroformation from **τεῦμα*, -*ατος* 'quick movement, speed, impetus' from **kyew-mh₂*, cf. *σέω* 'to hunt, chase, drive away' (*ky* > Att., Boeot. *τ*). *Τευμήσιος*, *Τευμησ(σ)ός* are erroneously Atticized forms, cf. *Τευμασι-γένης* in an inscription in which the form for dat.-loc. pl. from **Τεῦμα*, -*ατος* was preserved, see Georgiev 1958b: 44-45).

(c) -*s-yo-*, -*es-yo-*:

Κερησσός, erroneously Ionicized (or -*ασλ* > -*ησ(σ)*-), from *κέρασος* 'cherry', cf. *Κεράσαι*, *Κέρασος*, *Κερασοῦς*.

**Ἑδεσα* (Mac.) from **wedes-yā*, cf. Gr. *ἕδος* n. (*es*-stem) 'water', see above.

**Οδησσός*, **Οδεσσός* (Mysian), a town on the Black Sea coast, from **udes-yo-*, cf. Gr. *ἕδος* n. 'water'.

Σαλμυδησσός, a bay, river, and place in Thrace on the Black Sea coast, from **salm-udes-yo-* 'salty water', cf. Gr. *ἅλμη* 'sea water; salty water' and *ἕδος* n. 'water'.

(d) *σι* > *σλ* > *σσ* (Aeolian shift, cf. Thess. **Αγάσας* < **Αγασίας*, see Schwyzler 1934-39: 274, 322):

Agassa or *Agassae* (Livy), a town in Thessaly, cf. the Thessalian personal name **Αγάσας* < **Αγασίας*; for the formation cf. **Αντιπατρία* (a place name) from **Αντίπατρος* (personal name), *Ποιμανδρία* from *Ποίμανδρος*, *Theudoria* from *Θεύδωρος*, **Απολλωνία* from **Απόλλων*, **Ηράκλεια* from **Ηρακλής*.

(2) The suffix -*went-yā*, which appears quite often in the toponymy:

Κηλώσσα, a mountain in the northwestern part of the Peloponnesus, from **κα(F)ελο-(F)εσσα* (*ae* > Dor. *η*, *oe* > Dor. *ω*), a derivative of **κάFελον* > Dor. *κῆλον* = Att. *κᾶλον* 'tree' (*ae* > Att. *ᾱ*).

Λῆσσα from **λα(F)α[σ]-(F)εσσα* 'rocky', a derivative of *λᾶας* 'stone'.

Τίασσα (-*ος*), a spring (river) in Laconia, from **σιτῖα-(F)εσσα*, a derivative of *σιτῖα* 'river stone' (*σι-* > Lac. *τ-*).

Παγασαί (Hdt., etc.), *Pagasa*, *Παγάση*, a bay in Thessaly, from **παγ-ᾱ-(F)εσσα*, a derivative of *πᾶγος* m. 'rock, mountain, hill, promontory'.

Μάρπησσα, ὄρος *Πάρου* ἐξ οὗ λίθοι ἐξάιρονται (marble from Paros: St. Byz.) from **μαρμ[α]ρ-ᾱ(F)εσσα*, a derivative of *μάρμαρος* 'marble' or from *μάρμαρ* στερεόν (Hesych.) with haplology and dissimilation *μ-μ* > *μ-π*.

Καλάμιστα with *η* = *ι* from **Καλαμῆσα* < **καλαμῆεσσα*, a derivative of *καλάμη* 'straw, reed'.

Πύρασος instead of **Πυρᾱσ(σ)α* from *πυρός* 'wheat'.

**Ρυτιασσός* (and **Ρύτιον*) from **ρυτι-ᾱ(F)εσσα*, cf. *ῥυτίς* f. 'pucker, wrinkle'.

(3) Loc. pl. in -*αῖσι* (-*ησι*), -*σι*. The place names *Κορυφάσιον*, *Πτελεάσιον*, *Νυμφασία*, *Κεράσιον* are secondary formations (from adjectives and from

ethnicons) derived from place names in the loc. pl., cf. (Dor.) κορυφᾶσι from κορυφή 'peak', πελέεσι from πελέα 'elm-tree', Νύμφασι from Νύμφαι, Κεραύσιον from *κεραυν-σι (originally *n*-stem), cf. κεραυνός 'thunderbolt'. Similarly:

Ταφιασσός (Τάφιον, Τάφιον ὄρος) from ταφιᾶσι loc. pl. from ταφιά, a collective from τάφος 'grave, tomb'. The place name Τάφιον ὄρος is erroneously considered to be pre-IE (cf., for instance, Schachermeyr 1954: 1499): τάφος is an adjective of Greek origin, a derivative of the Greek word τάφος.

Ποικιλιασσός (Anonymi *Stadiasmus maris magni*), Ποικιλᾶσιον (Ptol.), a Cretan town. Ποικίλη f. from ποικίλος 'variegated' is often found as a place name, cf. also Ποικίλον τὸ ὄρος, a mountain in Attica. The original form was *Ποικίλασι loc. pl. from *Ποικίλαι (cf. Att. Ἀθήνησι 'in Athens') from which come the ethnicon Ποικιλᾶσιος and the adjective Ποικιλᾶσιον (scil. χωρίον, ἄστυ). Ποικιλιασσός is a retroformation on the basis of the ethnicon.

Μηκαλιασσός from *μυκάλη — Μινκάλη; cf. ἄ-μυκάλαι 'points of the spears' with a connecting ἄ- (ἀ-), cf. ἄ-λοχος f. 'spouse', ἄ-κόλονιθος 'companion', ἄ-πεδος 'flat (land)', etc.

Μύλασ(σ)α from μύλη 'mill'.

Τελινησ(σ)ός, erroneously Atticized (Ionicized) from τέλμιασ(σ)ι loc. pl. from τέλμια, -αιος 'stagnant water, marsh'.

Ἰασον ('Αργος), Ἰασος, Ἰασ(σ)ός from *Iā(F)asi < *IāFη-σι loc. from Ἰά(F)ορες 'Ionians', see section 5.4.

(4) Pelasgian place names in -īs(y)o-⁴⁶:

Λαροίσ(σ)α from *ΛαFαγ-ίσ(σ)α (or *la^{war}-went-yə), see section 5.3.

Κηφισ(σ)ός, Dor. Κῆφισ(σ)ός from *kāp^h-īs(y)o- (or *kāp^h-ent-yə), see section 5.3.

Τυλισ(σ)ός, a town in Crete, from στῦλος 'pillar' (?) with στ- > Cret. τ-. According to Huxley from Hitt.-Luw. *tuliya^{sa}/i-, a derivative of Hitt. tuliya- 'council, meeting'.

Πανισός, a river in Thessaly, from *pon-is-(y)o-, cf. Hitt. Panissa, a place name, Thrac. Pani(s)sa(s), Panisos, river names, Goth. fani 'mud' from *pon-i-.

Ἰλυσ(σ)ός, a river in Attica and on the island of Imbros, from *īlF-ισ(σ)ο-, cf. Gr. ἰλῦς, -βος 'mud, slime'.

Ἀμνισός, a river on the island of Crete, cf. L. amnis 'river' from *a(m)b^h-ni-s, Skt. ambha^h n. 'water'.

5.11. Some Problems in Chronology

Since most ancient times considerable demographic changes have taken place on the Balkan Peninsula: Greeks invaded the Aegean region, Mysians migrated to Asia Minor, Phrygians coming from Macedonia passed through south Thrace and settled in central Asia Minor, etc. Is it possible to approximately establish the chronology of these ethnic movements?

⁴⁶ See Georgiev 1961b: 94-95.

The Greeks conquered the central and southern part of Greece at the latest during the beginning of the 2nd millennium B. C., and probably even earlier.⁴⁷ Mysians, Mygdonians, and Dardanians migrated from the Balkan Peninsula to Asia Minor (Mysia and Dardania) as early as the first half or towards the middle of the 2nd millennium B. C. We have the following evidence for this: (a) *Μυσοί*, *Μύγδορες*,⁴⁸ and *Δαρδάνοι* (*Δαρδανίη*) are recorded in the northwestern part of Asia Minor in the *Iliad*, i. e., towards the end of the Mycenaean period: (b) *m's'(w)* = *Μυσοί* and *drdnj* = *Δαρδάνοι* are mentioned in Egyptian documents from the 15th-13th centuries B. C. as living in Asia Minor; (c) the name of *Muški* (*Mušku*, *Μόσχοι*, etc.) from *Μυσ(οί) + k^c* (the Armenian ending for the plural) appears in different documents from the 12th century B. C. onwards in northern Asia Minor between the Propontis and Melitene.⁴⁹

The name of the Phrygians (*Φρύγες*) and of the two regions called *Φρυγίη*, one near the Hellespontus (*Φρυγίη καθέπερθε*, *Iliad* XXIV, 549) and the other near the Sangarios River have been attested since the time of the *Iliad*. Phrygian tribes therefore must have migrated to Asia Minor at the latest during the 13th-12th century B. C.⁵⁰

Thus, the migration of the Mysians, Mygdonians, and Dardanians from the central and northeastern part of the Balkan Peninsula towards the northwestern part of Asia Minor took place no later than around the middle of the 2nd millennium B. C. The invasion of the (Daco-)Mysians to the south of the Danube into Mysia (Moesia), Dardania, (eastern) Macedonia, and (north) Thessaly took place during the 3rd millennium B. C. The last migration corresponds to the appearance of the Dimini culture which, according to Schachermeyr (1954), was introduced by tribes coming from western Dacia along the valleys of the Margos and Axios Rivers towards 2800 B. C.⁵¹

Using archaeological data the Bulgarian archaeologists Mikov and G. Georgiev assume the existence of three different cultures in Thrace, which correspond to three ethnical layers:⁵² (1) the population of Karanovo I-III (6th-4th millennium; Neolithic), which was related to the population of western Asia Minor and the Aegean region (pre-Sesklo, Larissa I, Servia); (2) the population of Karanovo IV-V (3rd millennium: chalcolithic), which was related to the population from the northern part of the Balkan Peninsula (Boian I, Gumelnița, and Dimini in Greece); and (3) the population which existed from the beginning of the Bronze Age (Karanovo VI: about 2000 B. C.) and which brought an end to the culture of the painted (graffito) ceramics.

This assumption is compatible with the linguistic data given above. The most ancient ethnic layer in Thrace were the Thracians, whose language

⁴⁷ According to Schachermeyr (1954: 1453, 1480-1481), during the 20th century B. C. (1950), i. e., at the beginning of the Middle Helladic Period.

⁴⁸ *Μύγδορες* is recorded in the *Iliad* as the name of the Phrygian king *Μύγδορ, -ορος* (*Iliad* III, 186).

⁴⁹ See Gusmani 1959: 846.

⁵⁰ Cf. Gusmani 1959: 848.

⁵¹ See the map of this migration in Schachermeyr 1955: 122.

⁵² See Mikov 1958: 47-48 and 1959 which contains some chronological amendments made by the author on the basis of new data; G. Georgiev 1961; cf. also Mellaart 1960: 270-271.

was closely related to the language of the pre-Greek ("Pelasgian") population and to the languages of the IE tribes in western Asia Minor. A second migration took place when Daco-Mysian tribes invaded Mysia (= Moesia) and the central part of the Balkan Peninsula (Dardania, Mygdonia, and even Thessaly): during the 3rd millennium B. C. and later Daco-Mysians migrated through Thrace into northwestern Asia Minor. At the beginning of the Bronze Age the Phrygians, who were the tribes who destroyed the culture of the painted (graffito) ceramics, came from the region of Axios, conquered southern Thrace and later moved onward into Asia Minor.

This is compatible with the fact that at the beginning of the 2nd millennium B. C. different sites of the eastern part of the Balkan Peninsula were abandoned. The same phenomenon occurred in northwestern, central, and eastern Asia Minor towards the end of the Old Bronze Age (1900 B. C.) when many important settlements were destroyed and abandoned.⁵³

Can we speak of "Greeks", "Daco-Mysians", etc., during the 2nd and the 3rd millennium B. C.?

The name *Γραικοί*, which is the name of the old population of Epirus near Dodona, has been recorded since the 4th century B. C. (Ar., Call., Lycophr.) and was recorded as the eponym *Γραικός* from the 8th century (Hesiod.) onwards.

The name *Ἕλληνες* has been recorded since the *Iliad*, at first only as the name of the population of the region *Ἑλλάς* in southwestern Thessaly.

The name *Θρᾷκες*, Ion. *Θρηϊκες* has been recorded since the time of the *Iliad*. The Greeks knew of it before the 15th century B. C. (before the disappearance of intervocalic *s*, see section 7.4).

The name *Δακοί*, *Δάκων*, *Δάκες*, *Dāci* has been attested since the 2nd century B. C.

On the whole all these names are recorded quite late, but for linguistics (as well as for archaeology, ethnology, and history) it is absolutely necessary to give names to the peoples who spoke more ancient stages of these languages, and this leads us to very remote periods in time. In this case, when we use the term "Greeks" (or Proto-Greeks) we are referring to the tribes which, during the 3rd millennium B. C., spoke the language which was the immediate predecessor of the Greek language which is attested from the second half of the 2nd millennium onwards. In the same way we give the name Thracians (or Proto-Thracians) or Daco-Mysians, etc. to the tribes which spoke languages with a specific phonological system to which a certain type of place names corresponds. These names and terms are absolutely necessary for the treatment of ethnogenetic problems.

5.12. *The Ethnogenesis of the Balkan Peoples in the Light of Onomastics*

5.12.1. The Balkan Peninsula

The investigation of the ethnogenesis of the Balkan peoples is easier than that of other parts of Europe because of three quite favorable facts. They are as follows.

⁵³ Cf. Mellaart 1958: 9-10.

(1) Data are available about the Balkan Peninsula which date back to the most ancient times. The inscriptions in Linear B are the most ancient historical documents in Europe.

(2) Proper names were recorded on the Balkan Peninsula 32 to 35 centuries ago.

(3) The majority of the Balkan languages such as Greek, Bulgarian, Rumanian, and Serbocroatian, have preserved the phonematic structure of the words quite well, cf., for instance, the name of the Strymon River (recorded in Hesiod) and modern Bulg. *Struma*. This makes it possible to restore the old forms of the place names which were not attested in ancient times and to establish their etymology, while it is extremely difficult and sometimes practically impossible to do this in France, England, or Germany, since the phonematic structure of the words has greatly changed in French, English, and German. If, for instance, it was not known that in antiquity the city of Lyon was called *Lugudunum* (in the contemporary form only the first and one of the last consonants is preserved), it would have been impossible to establish its etymology.

For this reason investigations in the field of onomastics in the Balkan Peninsula are exceptionally important not only for the ethnogenesis of the Balkan peoples but also for the ethnogenesis of the whole of Europe.

The following are some general conclusions:

(1) The ancient toponymy of the Balkan Peninsula (especially of the southern and southeastern regions) was closely related to the toponymy of western (and southwestern) Asia Minor: this was due to the fact that even in the most remote times closely related IE tribes and peoples have lived in this area.

(2) The ancient toponymy of the Balkan Peninsula does not give any definite evidence of the existence of a pre-IE population. If there were invasions by non-IE tribes in ancient times, there were only a few: the fact that the invasions left no traces in the toponymy is proof enough for this. But during the time of slave society which started quite early in the Aegean region (probably at the beginning of the 2nd millennium B. C.), a considerable number of slaves were driven to this area from different lands; these slaves were later gradually assimilated by the indigenous population.

(3) The Aegean region was not populated during the Early Palaeolithic Period (about 600,000 to 80,000 B. C.). Central and northern Greece were already populated during the Middle and Late Palaeolithic Period (about 80,000 to 10,000 B. C.) but the population was extremely scarce. Its culture was related to the culture of the European tribes. During the Mesolithic Period (10,000 to 6,000 B. C.) western Greece was not yet populated. In eastern Greece a culture existed which was similar to that of other regions of the Balkan Peninsula.

(4) In describing the similarity between the neolithic cultures of western Asia Minor (Çatal Huyuk, Kazilkaya, Hacilar); Thrace (the valley of Marica, Karanovo), Greece (central Greece, Thessaly), Macedonia (Nea Nikomedia), and Yugoslavia (Porodin, Vršnik), Mellaart (1958: 12-13) makes the following conclusions: "it is impossible to say whether the related cultures across the Aegean or the sea of Marmora were the result of primary Anatolian civilization or secondary interaction of advanced Anatolian ideas and cultures on a local and receptive European substratum." There was certainly

some influence from the southeast due to the fact that this entire region was populated by closely related tribes of IE origin; the affinity of the cultures was due, in my opinion, mainly to the fact of the close kinship among the tribes.

5.12.2. Crete

In the past the thesis that the Greek invasion of the island of Crete took place towards the end of the Mycenaean period was considered to be very probable. Today, however, on the basis of the existing Greek place names on the island of Crete, which are recorded in the Mycenaean texts from the 14th-13th centuries B.C., it can be assumed that the Greeks lived in some parts of Crete much earlier. Below are some of the toponyms found in Crete which may be considered Greek.

apatawa (KN) = **Απα(α)Fa*, Dor. **Απααα*, Att. **Απεαα*, **Απέαα*. The origin of this name was established long ago: the town was named with the name of the goddess who was worshipped there: *ἄ' Ἀρτεμις ἄ' Ἀπέαα* 'Artemis without wings'.⁵⁴ In **Απα(α)Fa* = Dor. **Απααα* there is assimilation of *a-e-a* > *a-a-a*. The name is derived from **ἄπτερος* > *ἄπτερος* 'without wings', cf. also *πτερον* in Hom. *πτερον*, -*πτος* 'wing', Skt. *patāru-* 'flying', L. *pro-ptervos* 'προπτεής' from **pter-wo-*.⁵⁵ There is no sound reason for considering *apatawa* = **Απα(α)Fa* to be a pre-IE name related to the Hittite *pa-ta-ri* 'town'.

ekoso (KN) = Delphian *ἐξος* 'outwards', Cret. *ἐζου*, Att. *ἐξω* 'outside; far; out of town' (l. e., *ἡ ἐξω χώρα*).

era (KN) = **Ηρα* as a place name, cf. *Λαιώ*, a town on the island of Crete.

kiri jo(de), kiri jo(te) (KN) = *κρός* 'ram', cf. the Cretan place name *Κροῖον μέωπον*.

paīto (KN) = *Φαί(σ)το(ς)*. The place name *Φαιστός* and the personal name *Φαῖστος* (*Iliad*, Pind., etc.) are derived from a more ancient *Φαῖστος*, as is shown by the Mycenaean graphic *paīto*. *Φαῖστος* is the superlative of *φά(τ)ος* = Aeol. *φάπος*, Pamphylian *φάπος* n. 'light, brightness, glory; happiness', cf. Lesb. *φάππος*, Ion. *φαιπός*, Att. *φᾶνός* 'bright, light'; for the formation cf. *πρόδοτος* from *πρόδος* n., *κόδοτος* from *κόδος* n., *ἐλγιστος* from *ἐλγος* n., *ἀλγιστος* from *ἀλγος* n., *ἐλέγγιστος* from *ἐλέγγος* n.⁵⁶ The place name *Φαιστός* is found not only on the island of Crete but also in the Peloponnese and in Thessaly. It is related to the personal name *Φαῖστος* < **φαF-ιστος*. The information given by Pausanias (2, 6, 7, 10, 1) and by Stephanus Byzantius, according to which the Heraclides (?) *Φαῖστος* moved from Sicily to the island of Crete and founded the town of *Φαιστός*, obviously contains some historical truth. Originally *Φαῖστος* was either a personal name, a tribal name (**φᾶ(F)ιστος*) or the name of a divinity; probably it appeared as hypostasis of *Φαῖστος* (*τόπος, χώρας*), *Φαιστία* (*χώρα, πόλις*), *Φαῖστος* or *Φαῖστον πόλις*. It is known that personal and tribal names can become place names, cf. the Greek place names *Βυτιάδα*, *Φιλᾶδα*, *Ἰονίδα*, etc.⁵⁷ The disappearance of the digamma in intervocalic position before *i* is attested in other examples from the Mycenaean inscriptions (see Georgiev 1966f).

paškowei jo (KN), cf. *Φηρός*, *Φηραία*, *Φήρει*, *Φηγεῖς* from *φαγῶ(F)ερ(τ)ος* Greek place names; for the suffix cf. Myc. *potini jawe jo* (KN, PY) = *ποτινῆFιστος*, a derivative of *πότινα*.

qamo (KN) = Dor. *πᾶμα* 'κτημα, possession' from **kʷās-my*.

⁵⁴ Cf. Solmsen and Fraenkel 1922: 75. Cf. the name of the town of *Λαιώ* in Crete.

⁵⁵ Cf. Walde and Hofmann 1938-56: 377.

⁵⁶ See Schwyzler 1934-39: 539.

⁵⁷ See Solmsen and Fraenkel 1922: 67-68.

qarajo (KN), a place name and ethnicon = (Att.) *Παλαῖοι*, a town on the island of Crete.

gasarowe (KN) = *Kωασ(σ)αλοFs(vis)* or *-s(r)*, cf. Att. *πάσσαλος* 'peg, pale'.

rijono (KN) = **Pl[or] ῥῖων*, cf. the Cretan place name **Ορον γράδος*.

rukito (KN) = *Λέκτιο(ς)*, later *Λέκτιος*, cf. Cret. *λυττόν* 'τό ἄνω καὶ ὑψηλόν' (St. Byz.), L.G. *Lucht*, G. *Luft*.⁵⁸

On the basis of these place names attested in the Knossos texts, we may conclude that Greeks inhabited some parts of the island of Crete before the 14th-13th centuries B.C.

On the whole, the new data show that the Greeks lived in Greece far earlier than was thought previously. This view is confirmed by the fact that the greater part of the toponymy of Greece is of Greek origin. The presence of predominantly Greek toponymy in the Aegean region presupposes the presence of Greek tribes long before the most ancient written records.

The most ancient inhabitants of the island of Crete were Pelasgians and Eteocretans, who gave their name to the island. The names of the island of Crete and of its ancient inhabitants appear in some Semitic and Egyptian texts in the following forms:⁵⁹

Semitic (Assyrian, etc.): *Kaptara* = *Kaptra* 'Crete', in texts dating from the end of the 3rd millennium B.C., Mari from the 19th century and Ras Shamra from the 14th century.

Hebrew: *Kaphthōr* 'Crete' and *Kaphtor-im* 'Cretans', together with *Keret* 'Crete' and *Keret-im* 'Cretans' in the Bible and in other Hebrew texts.

Egyptian: *Kftty* and *Kfttyw* = *Kaftō* in texts from the end of the 3rd and during the 2nd millennium B.C. *Kfttyw* is derived from an older *Kftr*.

On the basis of these forms one can draw the conclusion that during the 3rd millennium and at the beginning of the 2nd millennium B.C. the Cretans were called **Kaptōr-es* and their island was called **Kaptr-ā* (or **Kaptr-yā*) 'country (region) of the **Kaptōres*'. This name is probably of IE origin = L. *captōres*, the initial meaning of which was probably 'hunters, fishermen'. The Semites and the Egyptians borrowed this name in its archaic form.

It was during the first half of the 2nd millennium that the assimilation of the consonant cluster *pt* into *tt*, followed by the simplification of *tt(r)* to *t(r)*, took place in Eteocretan (or Termilian). This phenomenon is also known in the classical Cretan dialect, cf. in the Knossos inscriptions from the classical period *ἑπτά* = Att. *ἑπτά* 'seven', in the Gortynian inscriptions *πέντον* = Att. *πέμπτον* 'fifth'. This shift was probably due to the Eteocretan (or Termilian) substratum in the Greek dialect from the island of Crete.

Therefore, the name *Kaptra* later became *Ka(t)tra*. This form is recorded in the name of a town in Crete, *Κάτρη*. Legend says that the founder of the town of *Κάτρη*, a man called *Κατρεὺς*, was the son of Minos, the king of *Κρήνη*. *Κατρεὺς* is no more than the ethnicon derived from the name of the town. There is a historical fact hidden in this legend: the recollection of the "Minoan" origin of the name of the town and its etymological relation with the names *Κάτρη* and *Κρήνη* has been preserved in the connection between the name *Κάτρη*, King Minos, and the name of the island of Crete.

⁵⁸ Cf. Fick 1905: 13.

⁵⁹ On this data see Vercoutter 1954: 63-64.

In two texts from Knossos (KN Co 906. 1, KN V 145.4) mention is made of the place name *katarai* and *katarapi*, probably loc. pl. *Κατα(ι)αι* = Hom. **Κατρηαι* and *Κατρηαι*, probably forms of the later place name *Κατρη*. This indicates that the shift *pt* > (*t*)*t* had already been realized by the 14th-13th century B. C.

The name *Katra* changed thereafter, according to folk etymology, into **Kṛātā* > Hom., Ion. *Κρήτη*, considered to be = Ion. *κρητή*, Att. *κρητή* 'mixed', a participle from the verb *κράννυμι* 'to mix'. This folk etymology is recorded in *Etymologicum Magnum*: *Κρήτες*,... ὁ Ἀπολλόδοτος παρὰ τὸ εἶναι κρηαῖσθαι τὸν περὶ τὴν νῆσον ἄερα.⁶⁰

The most ancient names for the island of Crete and for its inhabitants, *Kaptra* and *Kaptōr(es)*, are therefore probably of IE origin. This conclusion is of great importance for the ethnogenesis of the Aegean region.

The "Eteocretan" language: four quite badly damaged inscriptions, which were found in Praisos on the island of Crete,⁶¹ are arbitrarily called "Eteocretan". Later an inscription from Dreros, which dates from the 4th century B. C., was added to them. These inscriptions are considered to be "Eteocretan" only because it is difficult to interpret them. In my opinion the language of these inscriptions is probably a Greek dialect from the island of Crete.⁶²

5.12.3. The Aegean Region : Conclusions Based on a Comparison of Linguistic, Archaeological, and Historical Data

The brief remarks given below by no means exhaust the problem of the ethnogenesis of the Greeks. Many issues in this field are not yet clarified and many assertions are still quite hypothetical. The following exposition aims at pointing out some of the data and suggestions which have been presented on this problem. This condensed summary of the complex questions about the ethnogenesis of the Greek people is the result of numerous investigations which have been published throughout the past forty years.⁶³

The ancient authors (Herodotus, Thucydides, etc.) inform us that the Ionians, before conquering the coast of Asia Minor and the islands, lived in Attica and Megara, later migrated to the north coast of the Peloponnesus, and finally some of them returned to Attica and some of them moved on to the Aegean islands and Asia Minor. This is confirmed to a great degree by the *Iliad* (XIII, 685 ff.), in which the Ionians are mentioned as living between the Boeotians and the Locrians, and together with the names of these peoples we find the names of the Phlians, the Epeians, and the Athenians.

⁶⁰ But if *kerete* (PY An 128.3) is = *Κρήτες*(s), the name *Κρήτη* (*Κρήτες*) must be of different origin.

⁶¹ See J. Friedrich 1932: 145-146; Kretschmer 1949: 1-2.

⁶² See Georgiev 1947. The article by Kretschmer (1946) does not explain these inscriptions convincingly. See Voskresenskij and Natorov 1968 (Greek dialect?).

⁶³ Publications in recent years are Georgiev 1966c; 1966g; 1967c; 1969d; 1971c; 1972a; 1972c.

The most ancient form of the name of the Ionians, which is mentioned once in the *Iliad* and in one of the so-called Homeric hymns, is *Ἰῶνες*, which derives from **IṵFores* and corresponds to the form *yawan* which is used in texts from the Near East when reference is made to the Greeks. This name is attested once in an inscription in Linear B from Knossos in the form *ijawone*. Hellenicists, Callimachus, Strabo, and Pausanias report that the most ancient population of Boeotia was called *Ἰῶνες* and that their region was called *Ἰωρία*. The name *Ἰῶνες* is identical with *Ἰᾶνες*; both are derived from **(i)yāwones*: one of them is derived from the form with the vowel *i* while the other is derived from the form with the semi-vowel *y*. These are two forms of the same name preserved in two different dialects. It can be concluded that the Ionians, before settling in Attica, lived in Boeotia and that they were the ancient inhabitants of Boeotia.

Herodotus reports that the Athenians were Pelasgians which later had been assimilated by the Greeks (VIII, 44): *Ἀθηναῖοι δὲ ἐπὶ μὲν Πελασγῶν ἔχόντων τὴν νῦν Ἑλλάδα καλεομένην ἦσαν Πελασγοί, ὀνομαζόμενοι Κραναοί, ἐπὶ δὲ Κεκροπίος βασιλέως ἐπεκλήθησαν Κεκροπίδαι, ἐκδεξιμέτρου δὲ Ἐρεχθίδος τὴν ἀρχὴν Ἀθηναῖοι μετωνομάσθησαν.*

The information given by Herodotus completely confirms the data provided by the toponyms. The name *Ἀτθίς* and the derivative *Ἀτθικός*, *Ἀττικός* are of Pelasgian origin, as can be concluded from the shift *kt > tθ*, *τ*, because *kt* is preserved in Greek. This name corresponds exactly to Gr. **ἀκτίς*, *ἀκτικός*, cf. *ἀκτί* 'headland, promontory', *Ἀκτί*, the name of many Greek places, including Attica.

Herodotus furthermore gives the following information about the Ionians (XII, 94): *Ἰῶνες δὲ ὅσον μὲν χρόνον ἐν Πελοποννήσῳ ὄκνον τὴν νῦν καλεομένην Ἀχαΐην καὶ πρὶν ἢ Λαλαόν τε καὶ Ἰοῦθον ἐπικέσθαι ἐς Πελοπόννησον, ὥς Ἑλληνες λέγονσι, ἐκαλέοντο Πελασγοὶ Αἰγυαῖες, ἐπὶ δὲ Ἰῶνος τοῦ Ἰοῦθου Ἰῶνες...*

Therefore the Peloponnesus and Attica were populated by Pelasgians probably not later than the 4th millennium B. C. Towards the end of the 3rd or at the beginning of the 2nd millennium B. C., Proto-Ionians left western Boeotia (i. e., *Ἰωρία*) and migrated to Attica and the Peloponnesus (either peacefully or by fighting), where they superimposed themselves on the Pelasgians and assimilated them. During the middle of the 2nd millennium B. C. Aeolian tribes invaded the Peloponnesus. During the 12th-11th century B. C. Dorians invaded southern Greece and assimilated the indigenous population of the Peloponnesus, of Crete, and of the southern islands.

On the whole the general picture of the ethnogenesis of the Greek people, based on a confrontation of linguistic, archaeological, and historical data, is as follows:

Palaeolithic (and Mesolithic) Period: Man appeared on the territory of Greece during the Middle Palaeolithic Period (Macedonia, Chalcidice, Epirus, Thessaly, Boeotia, Elis, Argolis?) and penetrated probably from the north.⁶⁴ The population was very scarce and it was nomadic. It did not leave any tangible linguistic traces which would help us in finding out whether it was of pre-IE or of IE origin.

Early Neolithic Period: the population increased and started to carry on a settled way of life. This was the period during which the most ancient

⁶⁴ See Weinberg 1965: 3-4; Rachtel 1970: 62-63.

toponymic layer was formed: these are the place names in *-vθ-*, *-σ(σ)-*, etc., which are distributed in central and southern Greece, Crete, and on the majority of the Aegean islands. Since, according to Greek tradition, the Pelasgians were the main pre-Greek population in the Aegean region, this toponymic layer may be considered to be Pelasgian. According to etymological investigations of the pre-Greek toponymy, Pelasgian is closely related to Thracian (cf. *Βισάνθη*, *Ήλιονθος*, *Zilmissus*, *Καθησός*, etc.), on the one hand, and to Hittite-Luwian (cf. *Kuriwanda*, *Wiyawanda*, *Irhassa*, *Parnassa*, etc.), on the other.

During the same period the territories of contemporary northwestern Greece and Macedonia were populated by Proto-Greco-Macedo-Phrygian tribes. This conclusion is made on the basis of the close relationships between the Greek, Macedonian, and Phrygian languages, and the investigation of the ancient toponymy in this region.

Late Neolithic Period: in northwestern Greece the Proto-Greek language had already been formed: this is the original home of the Greeks. Evidence for this is: (1) all the important place names in this region are of archaic Greek origin; (2) the typical pre-Greek place names are lacking there.

Early Helladic I (±2750—2450) and II (±2450—2200) Period: according to a number of archaeologists, during this period settlers from Asia Minor who were skilled in producing metals came to the Cyclades and to different places along the eastern coasts of continental Greece. The most ancient toponymic layer in western Asia Minor is that of the place names in *nd* and *ss*, which are of Hittite-Luwian origin. These colonists, who exerted some influence on the Pelasgian population and who probably were assimilated by it, were therefore of Hittite-Luwian origin.

As far as the island of Crete is concerned, the archaeologists admit the existence of two ethnic groups (or layers): the population in the Neolithic Period (±6000-2600) and in the Minoan Period (from ±2600 onwards). This corresponds to the data in the *Odyssey* (XIX, 172 ff.), which distinguishes between two pre-Greek peoples: Eteocretans and Pelasgians. This also corresponds with the toponymic data. On the island of Crete there are two pre-Greek toponymic layers: place names of the Pelasgian type (*Βερέκωνθος*, *Δαβύκωνθος*, *Ήλιονθος*, *Ἀμινός*, *Βερκασος*, *Αάρισσα*, etc.) and others which may be explained with the help of Hittite-Luwian (*Μινώα*, *Καθησού-πολις*, *Κόνταιον*, *Μύκον(ν)α*, etc.). According to some archaeologists, towards ±2600 new settlers came from southwestern Asia Minor to (eastern and central) Crete. During the 2nd and the 3rd millennium B.C., southwestern and western Asia Minor was populated by Hittite-Luwians whose direct descendants are the Lycians, Carians, and Lydians. According to the Greek tradition, Crete was populated during the pre-Greek period by people who were called Terimilians and who were of Luwian origin (see below).

Early Helladic II and III (2400—±1950) Period: starting from their original home in northern Greece, the Proto-Greeks gradually began to invade the Aegean region.

During the first quarter of the 2nd millennium B.C. the Proto-Greeks had already settled throughout the whole of Greece; they were distributed in the following way: Proto-Dorians in northwestern Greece, Proto-Aeolians in northeastern and part of central Greece (Thessaly, Phocis, northwestern

Boeotia, Locris, Aetolia, and southern Acarnania), and Proto-Ionians in Attica, Euboea, Boeotia, and the Peloponnesus.

Middle Helladic ($\pm 1950 - \pm 1550$) *Period*: the inscriptions in Linear A (20th-16th centuries B. C. (with the exception of those from Haghia Triada) are written in a Luwian-like language ("Eteocretan"). This corresponds to Greek tradition, according to which the Termilians lived in Crete but migrated to Lycia very early. Their descendants are the Termilians, i. e., the population of Lycia, whose inscriptions (Termilian or Lycian) are written in a Luwian dialect. Therefore, the second pre-Greek people on the island of Crete were the Termilians (= Minoans), who are of Luwian origin.

Middle Helladic III ($\pm 1700 - 1550$) and *Late Helladic I* ($\pm 1550 - 1500$) *Period*: starting from Thessaly, Proto-Aeolians, probably Achaeans coming from Achaia Phthiotis, conquered (the greater part of) the Peloponnesus and partially superimposed themselves on the Proto-Ionian layer. The Kydonians (*Kύδωνες*) penetrated into western and central Crete: these were probably the first Greeks to invade the island of Crete. The inscription in Linear A from Haghia Triada (16th/15th century B. C.) are probably written in this Greek dialect.

Late Helladic = Mycenaean Period: towards the 15th/14th century B. C. the Mycenaeans (Achaeans) conquered (central) Crete. The Termilians (= Minoans) migrated to Lycia.

During this period, between the 15th and the 12th centuries B. C., the first common Greek language appeared (Linear B); it was a mixture of Proto-Aeolian and Proto-Ionian. This was the Mycenaean *koiné* which was spoken predominantly in the Peloponnesus (but not everywhere), in some parts of Crete (Knossos), and in other centers of the Mycenaean civilization.

Late Mycenaean III ($\pm 1230 - 1100$) and *Sub-Mycenaean* ($\pm 1100 - 1000$) *Period*: the Dorian invasion was the third and last Greek wave to cover southern Greece.

A comparison of Hittite and Greek from the 2nd millennium B. C. leads to important conclusions. Hittite and Greek superimposed themselves on substrata of comparatively high cultures, higher than the culture of the invaders. The results, however, were entirely different. The pre-IE Hittite substratum had strongly influenced Hittite: a great number of Hittite words are of foreign, non-IE origin; a great part of Hittite onomastics (personal names and place names) is also of non-IE origin. The Greek language, on the contrary, clearly preserved its archaic IE character. The onomastics, which include about 70 per cent of the words in the Mycenaean texts, is of IE origin. On the basis of this fundamental difference the conclusion may be drawn that the Greek language did not overlay a pre-IE substratum but another IE language which was closely related to Greek. On the whole this fact makes the existence of a pre-IE substratum in ancient Greece doubtful.

The Ancient Indo-European Languages of Asia Minor

6.1. Hittite, Luwian, and Palaic

The Hittite language is attested as far back as about 1800 B. C. in the form of separate words and from 1650 until 1200 B.C. in text form: Old Hittite 1650 (or 1590)-1400 and Late Hittite 1420-1200 B. C. For the name Hittite see section 7.6.

Hittite is an IE language because its grammatical and lexical structure are of IE origin. There are some non-IE elements in the vocabulary of Hittite but this does not affect the fact of its IE origin. There are no more foreign elements in Hittite than there are foreign elements in Armenian¹ or Slavic elements in Rumanian. Nevertheless Armenian is unquestionably a specific IE language and Rumanian is a specific Romance language.

There is a Hattic substratum and a certain Hurrian influence in Hittite. But it would be a mistake to consider the foreign elements in Hittite to be exclusively of Hattic, Hurrian or Caucasian origin. Other languages, especially Semitic², also influenced Hittite.

Compared to the other IE languages, Hittite shows some very archaic peculiarities but also many innovations. Until very recently the IE comparative-historical grammar was predominantly based on Greek and Sanskrit. The investigation of the Hittite-Luwian group was started not long ago. For this reason one finds some peculiarities in this group which were not known previously and consequently they appear somewhat strange (see section 11.5).

The following features may be considered to be characteristic of Hittite:

- (1) Preservation of the IE laryngeals to a great extent.
- (2) IE *ti* shifted into *zi* and IE *di* into *si*.
- (3) Ablaut in the adjectives of *i*- and *u*-stems.
- (4) *ai*-stems showing a marked tendency towards merging with *i*-stems.
- (5) Wide usage of *r/n*-stems.
- (6) The existence of genus commune and neutrum; no distinction between masculine and feminine.
- (7) Pronominal genitive in *-el*.

¹ See Tischler 1979: 266-7.

² Cf. Kapancjan 1954: 510; Krounasser 1956: 22-23.

- (8) Postpositional possessive pronouns.
 (9) Expression of the comparative and superlative degrees by an adjective+dat.-loc. (or. abl.).
 (10) The existence of *hi*-conjugation.
 (11) The participles of transitive verbs in *-(a)nt-* have a passive meaning, while those of intransitive verbs have an active meaning.
 (12) The existence of postpositions (no prepositions).

The Luwian language, which is attested in cuneiform texts from approximately 1400 to 1200 B. C., was spoken in southern Asia Minor, in western Cilicia, and in the areas to the west. The Luwian language is closely related to Hittite.³ According to Laroche, the difference between Luwian and Hittite is approximately the same as that between two Romance languages. As far as the IE character of Luwian is concerned, the arguments which are valid for Hittite are applicable to Luwian. The most specific features of Luwian as compared to Hittite are the following:

(1) IE *e*, which to a great extent is preserved in Hittite, shifted into *a* almost everywhere in Luwian.

(2) IE *tī* and *dī* are represented by *tī* in Luwian while in Hittite IE *tī* shifted into *zī* and IE *dī* into *sī*.

(3) Laroche (1963: 77-78) discovered an interesting peculiarity in the comparative-historical phonology of Luwian (as well as Hieroglyphic Luwian and Lycian) which partly explains Luwian consonantism. The velars which are preserved in Hittite as *k* disappeared (or shifted into a *h*) in Luwian when they were near palatal vowels, as for instance:

IE **ghesr-* 'hand': Hitt. *kessar*, *kesser-a-*, Luw. *issari*, Lyc. *izri*.

IE **k(e)i-* 'this': Hitt., Pal. *ki-*, Luw., Hier. Luw. *i-(?)*.

IE **dʰegh₁m* 'earth': Hitt. *tegan*, Luw. *tiyanmi-*.

IE **bʰr̥gh-* 'tall': Hitt. *parku-*, Luw. *parri-/parrai-*.

Hitt. *mekki-* 'much': Luw. *mai-*, *mayant(i)-*, *miyant(i)-*.

Hitt. *kimmar-a->kimra-*: Luw. *inunar-i->imri-*.

Hitt. *Lukka* 'Lycaonia, Lycia': Luw. *Lui-*, cf. Luw. *luha* 'light?'.
 Hitt. *nakki-* 'difficult': Luw. *nahhu(wa)-*.

(4) Wide diffusion of the *i*-stems.

(5) *-ati* ending for the abl.-instr.

(6) *-nzi* ending for the plural.

(7) Expression of the genitive through a possessive adjective formed by the suffix *-assa/i-*.

(8) The pronoun *za-* 'hic'.

(9) *-wi*, ending for 1st pers. sing. pres. act.: *-wi* from *-mi* after *-weni* or *-wani* 1st pers. pl. pres.

(10) Participle in *-m(n)a/i-* with a passive meaning.

(11) The suffix *-ahi(t)-* for forming abstracts.

The Palaic language is very scarcely recorded (a few fragments with about 200 words). Palaic was spoken in the northeast or northwest of Hattusa-Bogazköy. The investigations by Bossert (1944), Otten (1944; 1945; 1946), etc., make it clear that Palaic was close to Luwian.⁴ Some examples are:

³ On Luwian see Bossert 1944: 107-108; J. Friedrich 1950; Rosenkranz 1952a: 159-160; 1952b; 1955; 1956: 285-286; Otten 1954: 293-294; Kronasser 1956 *passim*; Laroche 1959; Kammenhuber 1959c; 1969b; Gusmani 1960a: 69-70.

⁴ See also Kronasser 1956: 15, 90-91; Kammenhuber 1959a; Carruba 1970.

-es = Hitt. *-es*, ending for nom. pl.
-as = Hitt. *-as*, ending for acc. pl.
paapa- 'father'.
anna- = Hitt. *anna-* 'mother'.
kart- = Hitt. *kard-* 'heart'.
tiyaz '(god of) the sun', cf. Luw. *tiwaz* '(god of) the sun', Hitt. *siwatt-* 'day' from
**diw-*.
malit- = Luw. *mallit-* 'honey'.
mayant- 'elderly person'.
tawananna 'reigning queen'.
wasu- = Luw. *wasu-* 'good'.
-mu 'mihi, me'.
-tii 'tu', *tun* 'tibi', *tuwa* 'tuus' (?).
-du = Luw. *-du* 'ei'.
-as = Hitt. *-as* 'is, ea', *-at* = Hitt. *-at* 'id' (enclitic), acc. *-an* = Hitt. *-an*, dat. *-si* =
Hitt. *-si*, pl. nom. *-as* c. = Hitt. *-e* n.
-apa- 'ille' (enclitic).
kuis 'who', *kuit* 'what'.
as- 'to be', *asdu* 'esto', *asandu* 'sunto'.
atanti 'they eat'.
ahuna = Hitt. *akuwanna* inf. from *aku-* 'to drink', cf. L. *aqua* 'water'.
suwant- = Hitt. *suwant-* 'full'.
kiitar = Hitt. *kitari* 'ponitur (positus est)'.
lukk- 'to kindle'.
anta = Hitt. *anda* 'in, inside'.
n(a ?) 'no', *ni(t)* 'no'.
nu = Hitt. *nu* 'now; and'.
man = Hitt. *maan* 'if'.
-ma = Hitt. *-ma* 'but'.
-(y)a 'and' (enclitic).

Palaic is the most archaic of the Hittite-Luwian languages. It has a greater number of Hattic (but not Hurrian)⁵ elements than Hittite (or Luwian).

When did the Hittite-Luwians, or the Indo-Europeans in general, settle in Asia Minor? Čikobava (1953:226) maintains that: "the settlement of the IE population in Asia Minor can be dated about the 2nd millennium B. C. but not earlier." Čikobava does not adduce data which prove his point of view and he could not have done so because such data are non-existent. Actually, he accepts the theory which has been dominant for a long time, according to which the original home of the Indo-Europeans was in north and central Germany (until the end of the 3rd millennium B. C.). This theory maintains that there could not have been any IE population in Asia Minor before the 1st millennium B. C.

Taking linguistic and archaeological data into account, Goetze (1957: 60-61) pointed out that IE (in his opinion Luwian) tribes conquered western and southwestern Asia Minor during the 3rd millennium B. C.⁶ Indeed some IE tribes lived in western and southwestern Asia Minor much earlier, where

⁵ Cf. Kammenhuber 1959a: 4-5.

⁶ See also Meillet and Cohen 1952: 17; cf. also Ungnad 1923: 1-2; Bittel 1950b: 270-271; Gamkrelidze 1956: 51-53; 1959: 14; Gurney 1962: 6.

they were in contact with non-IE populations living in eastern (northeastern) Asia Minor, and complex processes of language mixing took place. This thesis is confirmed by linguistic and archaeological data.⁷

6.2. The Hittite-Luwian Suffixes *-nd/-t-* and *-ss-*

In western and southwestern Asia Minor we find ancient place names which are typical of the Aegean-Asia Minor region; these names have the suffixes *-nd-* and *-s(s)-*. Such toponyms are lacking in east Asia Minor where the presence of a non-IE population is attested (Hattians, Hurrians). The results of the investigations by Kapancjan (1956b) are important in this respect. Kapancjan notices that place names with the suffix *-nd-* are not found in the cuneiform Urartean texts. They are almost non-existent in the ancient cuneiform texts from northeastern Asia Minor. The similar names found in Georgia and Armenia are obviously of a later origin and were transferred there due to the movements of certain peoples, as well as due to the Greek colonization. Names of this type found in the most ancient documents from northeastern Asia Minor are also considered to have been introduced from the south. Furthermore, Kapancjan emphasized that the suffix *-nd-* is IE.

The suffix *-nt/-d-* in Asia Minor is of IE origin. It is typical of all the Hittite-Luwian languages. The main types of this formation are as follows:⁸

(a) *-(a)nt/-d-* for forming diminutives: Hitt. *parna-* 'house' and *parnant-* 'little house (Häuschen)'.⁹

(b) *-ant-* for forming derivatives with the same meaning as the basic word; cf. *kemant-* and *kem-* 'winter' (as in Skt. *hemanta-* and *heman-* 'winter').

(c) Adjectives formed with the suffix *-want-* or *-mant-*: Hitt. *saman-kurwant-* 'bearded' from *zamangur* 'beard', Hitt., Luw. *esharnuwant-* 'bloody' from *eeshar-* 'blood'. This suffix is often used to form place names in different IE languages. For instance: *Oivóvda*, *Oivédvda* n. pl., a town in Pisidia (Cabalia), is a Hellenization of Hitt. *Wiyana-wanda* which corresponds to Gr. *Oivoῦς* from **Fowó-Fev(τ)s*. Cf. the suffix *-vant-* in Iranian mountain and river names: *Zarāvand*, *Burzavand*, *Sirāvand*, *Rūzvand*, *Alvand*, etc.¹⁰

(d) The suffix *-ant-* (from *-a-want-*?) to form adjectives: Hitt. *perun-ant-* 'rocky' from *peruna-* 'rock, mountain', etc.

(e) The formant *-ant-* used to form past (active and passive) participles: Hitt. *kunant-* 'killed', etc.

Similar conclusions were reached by Kapancjan (1956b) in his investigations of place names with the suffix *-s(s)-*. He pointed out that these names were found only to the west of the Euphrates but not in Subartu or Urartu. In his opinion, this suffix is of IE (Hittite-Luwian) origin.

The possessive adjectives formed by the suffix *-assi-* are typical of Luwian: *saušqāssi-* from the (Indian) name of the god *Sausga-*, *patassi-* from

⁷ See Bittel 1950a: 160-161.

⁸ See Georgiev 1941: 135-136; 1965b; 1968c; Sommer 1954: 1-2; Kronasser 1956: 125-126.

⁹ See Georgiev 1965b; 1968c.

¹⁰ See Eilers 1954; see below.

pata = Hitt. *pat(a)*- 'foot', etc.¹¹ This suffix is closely related to the genitive ending *-o-syo*.¹² The same suffix is found in Lycian (Termilian) and Milyan: Lyc. *-ahi*, Mil. *-asi*.¹³ It corresponds to the Latin suffix *-arius*, Osc. *-asio-* from *-asyo-*, cf. Luw. *Hantassa* 'god of the forehead' from *hant-* 'front part, forehead';¹⁴ Lyc. (Term.) *atlahi* = Mil. *atlati* 'one's own'.¹⁵ The suffix *-ā-syo-* is of the same origin as *-o-syo-*.

In some cases *-assa-*, *-assi-* could have originated from derivatives of the *os/es-* stems, cf. Hitt. *witassa-* (= *wetassa-*) 'annual' from **wetos-yo-*, cf. L. *vetustus* 'old' from **wetos-to-s*.

The place names in *-nd/t-* and *-ss-* represent the oldest known toponymic layer in western and southwestern Asia Minor. Therefore, the oldest population in this region, i. e., the population which goes at least as far back as the Neolithic Period, was of Hittite-Luwian (or IE) origin.

6.2.1. The Origin of the Toponyms Formed by the Suffix *-nd/t-*

Recent studies by Laroche (1957; 1961), Neumann (1962), and others have shown that the place names of Asia Minor formed by the suffix *-nd/t-* have reliable Hittite-Luwian etymologies. Examples are:

- Ἀρνυῶνδα ἡ πότις* (Lycia) = Hitt. *Arnuwanda-s*, a place name, 'rich in springs'.
- Harpand/ta*, a place name, cf. Hitt. *harpa-* 'monticule'.
- Irhand/ta*, a place name, cf. Hitt. *irha-* 'borderline'.
- Haruanda*, a place name, cf. Hitt. *hari-* 'valley, gorge'.
- Καδύανδα* = Lyc. *xadawati* = Hitt. **kad-want-* from Hitt. *kant-* 'wheat'.
- Kapanuwanta*, a place name, cf. Hitt. *kappani-*, the name of a plant.
- Καρχασιῶνδα* (Καρχ-), a settlement in Caria, cf. *κάρπιος* 'flax' or *κάρπιον*, a plant.
- Kuriwanda*, a mountain in southwestern Asia Minor, cf. *Κόρυθος*.¹⁶
- Kuranda*, a place name, a participle from *kuer-* 'to cut' or a derivative of *kuer-* 'field'.
- Lalanda*, a place name, cf. *Λάλαδος*, a derivative of Hitt. *lala-* 'tongue'.
- Lalawainta*, a place name, a derivative of Luw. *lalawi-* 'ant'.
- Λαλιανδος*, a settlement in Cilicia, cf. *λίλιον* 'lily'.
- Mammananta*, a place name, a derivative of Luw. *mamana-* 'tree'.
- Marassand/ta*, now Turk. *Kızıl Irmak* 'red river', cf. Hitt. *mar(r)uwasha-* 'redness'.
- The name of the town of *Marassantiya* is a derivative of the name of the river.
- Millawanda*, cf. Dor. *Μίλατος*, Ion. *Μίλητος* from *μῆλος*, Myc. *mira₂* = *μίλα* 'yew, a kind of oak'.
- Μυριανδος*, a settlement in Cilicia, Hellenized *Μυριανδρος*, cf. Hitt.-Luw. *muiri-* 'grapes'.
- Ναδιανδος*, *Ναζιωνζος*, a settlement in Cappadocia, from Hitt. *nata-*, Luw. *nati-* 'reed'.
- Puranda*, see *Πύρανθος*.
- Ῥοδιανδος*, a settlement in Cilicia, from *ῥόδον* 'rose'.
- Sibidunda*, a settlement in Pisidia, from *στῆδον* 'pomegranate'.

¹¹ See Otten 1954: 29, 79.

¹² See Georgiev 1941: 127-128.

¹³ Cf. Meriggi 1936a: 2, 263.

¹⁴ Cf. Ivanov 1957: 18-19.

¹⁵ Cf. Kronasser 1956: 113. On Luw. *-assi-*, L. *-arius* see Werner 1954b: 303; Kammenhuber 1959a: 14.

¹⁶ See section 5.10.1.

Uruwanda-s, cf. Luw., Hitt., Hier. Luw. *ura-* 'big', see *Ἐρύμανθος*, Myc. *orumato* = *Ὀρρυμὰ(ν)θο(ς)*.

Waliwanda, cf. Hitt. *walli-* 'with hair cut short (?), depilated (?)'.

Wiyanawanda (Hellenized *Οἰνώανδα*, *Οἰρεάνδα*), a town in Pisidia, from Hitt. *wiyana-* 'wine', which corresponds to Gr. *Οἰνοῦς*, *-οῦντος* from *οἶνος* 'wine' or *οἴνη* 'grapevine'.

Wistawanda, a place name, from Hitt. *wista-*, Pal. *wista-* 'bread'.

6.2.2. The Origin of the Toponyms Formed by the Suffix *-s(s)-*

The Hittitologist Laroche (1957: 7) wrote the following about the Hittite-Luwian names in *-(a)ssa-* (*-assi-*): "The place names in *-ssa* do not point by any means that Luwian is more ancient. The theory about a pre-IE substratum in Anatolia cannot be based on this assumption."¹⁷ Laroche was able to prove that this suffix was of IE origin, as some linguists had assumed earlier. He came to the following conclusion (1957-67: 55, 163): "The Anatolian derivatives in *-asa-* and *-asi-* undoubtedly are derived from a suffix with a sibilant with the meaning of belonging — a suffix to which one may add some ancient endings for IE genitive: *-es/-os/-s*; *-osyo*; *-eso-*. We have already compared the adjectives in *-āri-* and *-ārio-*."

Laroche proved that the function of the Luwian possessive adjectives in *-asi-* (written *-assi-*, n. acc. *-assa*) corresponds to the function of the Hittite genitive in *-(a)s*. In Hieroglyphic Luwian the same function is fulfilled by the genitive in *-as* (very rarely) and the possessive adjective in *-asi-* (or in *-asa-*) whose exact correspondences in Lycian are *-h*, *-he*, and *-ehi*, *-ahi* (Lyc. B *-esi*). However, Laroche (1972:116) explicitly points out that the suffixes *-anda-* and *-(a)ssa* are not only Luwian but Hittite-Luwian: "The 'Luwian' theory of the toponyms in *-nt-* and in *-ss-* needs serious revision. The suffixes *-anda-* and *-ssa* ... belong ... to the Anatolian languages as a whole; their geographical expansion converges with the expansion of these two languages without marking isoglosses."

Some examples which illustrate the explanation of Hittite-Luwian names in *-assi-*, *-assa-* are:

Alpassi-ya, a derivative of Hitt. *alpa-* 'cloud'.

Harranassa (*Hurranassa*), the name of a town, a mountain, and a spring, cf. Hitt. *haran-* 'eagle'.

Haḫursalassi a derivative of the name *Haḫurs-ala-*, god of the storm (*nomen agentis*), cf. *harsiharsi* 'storm', Skt. *varṣa-* n. 'rain, rainy weather', *varṣati* 'it rains' = Hitt. *Warsas* 'rain(?)' from **wers-*, **urs-* (Hitt. *hars-* from *hurs-*).

Irhasa, a derivative of Hitt. *irha-* 'boundary', cf. *Irhandu*; *Irhandu* is probably from **Irhawanda*, see *Puranda*.

Kuwalpassi, a place name in southwest Asia Minor (Arzawa), = Pamphylian *Κολῖβας(ο)α*, probably from **kwolpo-* = Gr. *κόλπος* 'bosom; fold; bay; deep valley'; cf. *Κάλας* (-ης), *Κάλη*, the name of a river and of a place in Bithynia, from **kwolpo-* (or *-ā*), cf. Lith. *Kulpe*, the name of a river.

Parnassa (= *Παγρασός*), the name of a mountain, from *parn-assi-*, a derivative of Luw., Hitt. *parn-* 'house'.

¹⁷ Cf. also Mellaart 1958: 23 and 27, according to which the names in *-nd-* and *-ss-* cannot be either Hittite, or Hurrian but Luwian.

Petassa = *Πηδασα* (-σσα, -ov), towns in Caria, Troade, and the Peloponnesus, probably from Hitt. *peda-* 'place'. The name of the Peloponnesian town may be also explained in another way, see section 5.10.2.

Sallesa, a derivative of Hitt. *salli-* 'big'.

Tarhuntassa, *Tahruntassi*, a derivative of Luw. *Tarhunt-*, god of the storm, cf. *Tarhunt-issa*, a personal name.

Dattasa, a derivative of *Datta*, the name of the god of the storm.

Tiwatassa, the name of a mountain, from Luw. *tiwat-* 'sun, day, god of the sun', Hitt. *siwatt-* 'day'.

Wargassa, cf. Hitt. *warkant-* 'fat'.

Many of these names are found in texts from the 1st millennium B. C., as for instance:

The Carian personal name *Ovaosassus* (5th century B. C.) 'belonging to the locality *Ovaosos*'.

Adhosos '(town) of *Adas*'.

The (Carian) place name *Σvaosos*, *Soassa*, in Phrygia, from **siw-as(s)a-* 'god's', cf. Hitt. *siu-* 'god'.

Σέρρεος, the title of the king of Cilicia, from **siwann-as(s)i-s* 'godly', cf. Luw. *siwann-* 'god' and Carian *Σερρία*, a festivity in honor of the god *Sinri*, from **siwann-lya-* 'godly festivity'. See section 6.6.

Some other names with the suffix *-ss-* may also be explained in this way, for instance:

Λιζαγρασσός (Lysias, etc.), a town in southwestern Asia Minor, =(Hitt.-) Luw. **hali-harnas(a)i* 'Mauer-stadt', cf. Hitt. *hali* n. 'stable; wall, fence' and Hier. Luw. *harnas(a)i* n. 'town' (Huxley).

Καρησσός (-πολις), a town in the eastern part of the island of Crete, = Hier. Luw. *harnas(a)i* n. 'town' (Huxley).

Τρίλο(σ)ός, a town on the island of Crete, see section 5.10.2.

* * *

Friedrich and Kammenhuber assume that the Hittite-Luwian case endings *-el-*, *-li* and the suffixes *-nt/d-*, *-ass-*, *-al(l)a/i-*, etc., are of non-IE origin (Hattic or Caucasian).¹⁸ This is an atavism of the antiquated conceptions about the origin and the primitive home of the IE languages.

The Hittite pronominal ending for the genitive *-el* is the result of the dissimilation *m-n > m-l* and the apocope of the gen. sing. of the personal pronoun: PIE gen. sing. **mene > Hitt. ammel*. From there it was spread over the other pronouns.¹⁹

The Hittite ending for the locative *-ti* is identical with the Homeric locative ending *-θι*: both appeared under the influence of adverbs ending in *-ti*, respectively *-θι* from *-dhi* which in PIE meant 'here'. The same PIE adverb is the imperative ending for the 2nd pers. sing. *-dhi*: PIE **i-dhi* (Gr. *ἴθι*, Skt. *ihī* 'go') means 'go (come) here'.²⁰

The IE origin of the suffixes *-nt/d-* = pre-Gr. *-νθ-* from IE *-nt-* and *-ss-* from IE *-sy-* was proved long ago, see sections 5.10.1. = 5.10.2.

The Hittite-Luwian *l*-forms are discussed in detail and to a considerable extent explained by Van Brock (1962).

¹⁸ Cf. for instance Kammenhuber 1969b: 270-272.

¹⁹ Cf. Georgiev 1970.

²⁰ See Georgiev 1971a for details.

There are four types of *l*-formatives in Hittite-Luwian: (1) *-el* as an ending for the pronominal genitive discussed above; (2) the suffix *-ala/i-* to form *nomina agentis*; (3) the possessive suffix *al(l)a/i-*; (4) adverbs in *-ili*.

As a suffix for forming *nomina agentis* *-ala/i* has correspondences in different other IE languages, cf. Gr. (or Pelasgian) Dor. *σῡ-ἄλός*, Att. *σῡ-ἡλός* 'silent' from *σῡῆ* 'silence' or *σῡάω* 'to be silent', the Slavic preterite active participles in *-l-*, etc. Hitt. *pittiyali-* 'quick' from *pidd-* 'to run, to rush; to fly', *lahhiyala-* 'soldier, hero' from *lahhi-* 'to fight', etc., were formed in the same way. The preterite participle (and the preterite) in *l* in Lydian, Etruscan, and Slavic derive from such *nomina agentis*. Hitt. *auriyala-* '(soldier) at the frontier' from *auri-* 'frontier sentinel', *ispantuzziyala-* 'Weinbesorger' from *ispantuzzi-* 'Weinfass', *karimnaala-* 'Tempeldiener' from *karimn-* 'Tempel', *genzuw-ala-* 'friendly' from *genzu-* 'love, friendship' were formed after these *nomina agentis*. The possessive ('belonging to') suffix *-alla/i-* comes probably from *-alya/i-*, cf. Hitt. *attalla-* 'of the father' from *atta-* 'father', *huhadalla-* 'great-grandfather's' from *hukhant* 'grand-father, great-grandfather', *parnalli-* 'Hofjunker (?)' from *parna-* 'house'. These derivatives gave rise to the Lydian and Etruscan possessive formations in *-al(i)-*.

The adverbs in *-ili*, such as *luuwilli* 'in Luwian', represent an adverbialized locative (or neuter) singular of the possessive adjectives in *-iyala/i-* > *-ila/i-*. Words such as *luuwilli* locative (or neuter) sing. of the adjective **luuwi(ya)-l(l)a-* 'Luwian', a derivative of *Luuwiya* 'Luwia' are examples of this.

6.3. The Position of Hieroglyphic Luwian

As was already mentioned, one of the great achievements of IE linguistics over the last fifty years was the decipherment of the so-called Hieroglyphic "Hittite" inscriptions. The existence of these inscriptions, which date from the 14th (1300) to the 8th century B. C., had been a well-known fact for quite a long time. Most of the inscriptions originate from the period after the fall of the Hittite kingdom and are found in southern Anatolia and north Syria. Several attempts were made to decipher them but it was not until 1930-32 that the investigations by Meriggi, Gelb, Hrozný, Forrer, and Bossert laid the foundations for their final decipherment.²¹ The discovery of the bilingual inscription from Karatepe (1947)²² confirmed most of the previous interpretations and made it possible to continue the investigations.

The IE character of Hieroglyphic "Hittite" is now beyond any doubt.²³ The morphology and the vocabulary of this language show a close relation with Luwian. For this reason the term "Hieroglyphic Luwian" is undoubtedly better than the traditional term "Hieroglyphic Hittite".

The position of this language among the other Anatolian languages is an important problem from the point of view of comparative-historical linguistics. Gelb and Bonfante were of the opinion that, despite its close rela-

²¹ See J. Friedrich 1939.

²² See Bossert 1948: 515-516.

²³ See Gelb and Bonfante 1944: 169-170; Gelb 1950; Meriggi 1951: 181-182; J. Friedrich 1953: 134; 1952-66: 334-335; Kronasser 1956: 15-16, 228-229, 254-255; Kammenhuber 1969b.

tion with Hittite, Hieroglyphic Luwian belonged to the so-called *satəm* languages. This opinion was based on the phonetic form of the following words:

suwana- 'dog': Skt. *ś(u)van-*, Lith. *šuo*, Gr. *κύων* 'dog'.

asuwa- 'horse': Skt. *aśva-*, L. *equus* 'horse'.

sur(a)na- 'horn'; Skt. *śṛṅga-m*, L. *cornū* 'horn'.

But these Hieroglyphic Luwian words can be explained as being Indo-Iranian²⁴ or (Proto-)Indic borrowings. Such borrowings are already known in Hittite: *aikawartanna-* 'one turn (of the course)', *panzawartanna-* 'five turns', *sattawartanna* 'seven turns', *nawartanna-* 'nine turns', in which we find the Sanskrit words *aika-* > *eka-* 'one', *panca* 'five', *sapta* 'seven', *nava* 'nine', *wartana-* 'turn'; cf. especially the Hittite word *assu-(ssani)-* 'Pferde-(sach-kundig)' = Skt. *aśva-* 'horse'.

The Hittite-Luwians made use of two writing systems: one was borrowed (cuneiform) and the other was original ("hieroglyphic"). The language of the hieroglyphic texts is almost identical with Luwian, as for instance:

-a- 'is, ea, id' = Luw., Hitt. *-a-*.

aya- 'to make' = Luw. *aya-*, Hitt. *iya-*.

amu, -mu 'I, to me' = Hitt. *amnuuk*, Lyc. *amu*, Lyc. *ēmu, -mu*.

apa- 'this' = Luw. *apa-*, Hitt. *apa-*.

ara- (*ata-*) 'place' = Luw. *arra-*.

arha- 'boundary' = Hitt. *arha-*.

arha 'away (weg, fort)' = Hitt. *arha*.

arma- 'moon' = Hitt. *arma-*.

as- 'to be' = Luw. *as-*, Hitt. *es-*.

as- 'to seat, to sit' = Hitt. *es-*.

asi- 'to love' = Hitt. *assiya-*.

at- 'to eat' = Luw. *az-*, Pal. *at-*, Hitt. *et-*.

ata (*anta*) 'in, inside' = Luw., Hitt. *anda*, L. *endo* 'in'.

atuwara- 'bad' = Luw. *adduwali-*, Hitt. *idalu-*.

awa 'then' = Luw. *awa-* (?).

-ha 'and' = Luw. *-ha*, (Hitt. *-ya*).

harmahi- 'head' = Luw. *harmahi-*.

hartu 'grandchild' = Hitt. *hardu-*.

hawa-s or *hawi-* = Luw. *hawi-*, Lyc. *xava-*, L. *ovis* 'sheep'.

huha- 'grandfather' = Luw., Hitt. *huhha-*.

man 'if' = Luw., Hitt. *man*.

muwatali- 'strong, powerful' = Luw., Hitt. *muwatal(l)i-*.

pa- (*pi-*) 'to give' = Hitt. *paai-*.

-pa 'but' = Luw. *-pa* (?).

pat(a)- 'foot' = Luw. *pati-*, Hitt. *pat(a)-*, Gr. *πούς* (gen. *ποδός*) 'foot'.

suwa- 'to fill' = Hitt. *suw-*.

ta- 'to take' = Hitt. *daa-*.

takam- 'land, country' = Hitt. *tekan, tagn-* 'land'.

tanata- 'desert' = Hitt. *dinnatta-*, Gr. *θνητός* 'mortal'; *tanata(h)-* 'to devastate' =

Hitt. *dannattahh-*.

tati- 'father' = Luw. *tati-*.

ura- (?) 'big' = Luw. *ura-*.

²⁴ Cf. Goetze 1954a: 405; Werner 1954a: 155-156; Kronasser 1956: 15, 229; 1957: 513-514. Sommer's suggestion (cf. Kammenhuber 1956: 1-2) about *su*, that the IE 'palatal' was assibilated in Hittite before *u*, is not convincing.

usa- 'year' = Luw. *ussa-* (?) from IE **ut-s-*, cf. Gr. (F)*ἔτος* 'year'.

-wa 'now' = Luw. *-wa* (?).

wa(i)ana 'wine' = Hitt. *wiyana-*.

Furthermore, the morphemes and the formative elements in Hieroglyphic Luwian are the same as those in cuneiform Luwian (and Hittite), cf. for instance:

-as, ending for nom. and gen. sing.

-an, ending for acc. sing.

-ta, ending for 3rd pers. sing. pret.

-tu, ending for 3rd pers. sing. imperat.; etc.

Some endings and words in the hieroglyphic texts are not recorded in Luwian and Hittite or have a specific form, for instance:

-ai(a), *-i* nom. acc. pl., but Luw. *-nzi*, *-nza*.

wawa-s 'ox' from PIE **gweXu-* = Lyc. *vavū* acc. sing.

la-ta-a-as = Lyc. *lada* 'woman, spouse'.

a-ta-ma-i-na acc. sing., stem *(a)taman-* 'name': Lyc. *(a)tamv* 'name', Hitt. *laaman*, L. *nōmen* 'name'.

tapas (dabas) 'sky': Lith. *debesis* 'cloud', Skt. *nabhas-* 'sky, fog, cloud', Hitt. *nepis* 'sky'.

tu(wa)- 'to put': Lyc. *tuweti* 'he puts'.

tam- 'to build': Gr. *δῆμιον* 'to build'.

Thus, Hieroglyphic Luwian is simply a dialectal (and chronological) variety of Luwian; Laroche says (1957-67: 53, 160): "The 'Luwian' nature of the language of the hittite hieroglyphs is not a theory but an empirical statement which the decipherment imposes on everybody... This kinship does not exclude some divergences in the details..."²⁵ According to him the difference between Luwian and hieroglyphic Luwian is the same as the difference between two Greek dialects.

Therefore Hieroglyphic Luwian belongs to the group of "Luwian languages" to which Cilician, which is preserved only in proper names, and Lycian-Termilian are also connected.²⁶

6.4. Lycian = Termilian

The fundamental change which took place during the last forty years with regard to the conceptions about the relationships between the ancient Aegean languages can be very clearly seen in the history of the investigation of Lycian. As early as 1897-1902 Bugge, Torp, and Pedersen established the IE character of the Lycian language. But some inevitable errors made by these scholars during the first stage of the investigations, and especially the prestige of the dominant theory of the non-IE character of the pre-Greek population in Asia Minor, prevented the linguists from taking a correct stand on the question of the origin of this language. It was only in 1936, when the authority of this theory was being strongly questioned, that the Italian linguist P. Meriggi, after changing his views on the non-IE char-

²⁵ See also Puhvel 1966: 238.

²⁶ See Neumann 1969: 366,

acter of Lycian and Lydian, revived the results of Bugge, Torp, and Pedersen's investigations by adding new evidence for their conclusions.

There are about 160 Lycian inscriptions on stones, a Lycian-Greek-Aramaean trilinguis, and more than 100 short inscriptions on coins dating from the 5th to the 4th centuries B. C.²⁷ In these inscriptions the language and the people are called Termilian.

The so-called "Milyan" (or "Lycian B") language which is known to us through only three inscriptions, is considered to be a Lycian dialect. Pedersen (1945: 54-55) defined it as a specific IE language.²⁸

The meaning of some of the Lycian words and morphemes was determined by combinatory means without taking their etymology into consideration. Bearing in mind that we know very little about Lycian,²⁹ the quantity of reliable interpretations is considerable: on this basis Lycian was defined as an IE language.³⁰

Formerly there were two theories about the character of Lycian: one claimed that Lycian belonged to the so-called *satəm* group and the other claimed that Lycian belonged to the *centum* group.³¹ In his work *Lykisch und Hittitisch*, Pedersen pointed out a number of morphological and lexical elements which Lycian and Hittite have in common. Stressing the close relation between Lycian and Hittite, Pedersen wrote: "In some respects it is better to regard Luwian as the mother of Lycian..." This was brilliantly proved by the French Hittitologist Laroche (1957-67).

Today there is no doubt about the IE nature of Lycian: it represents a later phase or a dialect of West-Luwian.³² The most important examples of this are the following:

(A) Words indicating familial relations

ēni = Luw. *anni-*, Hitt. *anna-* 'mother'.

kbatra 'daughter' from **ibatra* < PIE **dʰughtr-*; Gr. *θυγάτηρ* 'daughter'.

xāna 'mother' or 'grandmother': Hitt. *hanna-s* 'grandmother', L. *anus* f. 'elderly woman', OPruss. *ane* 'mother' from PIE **hen-*.

xuga 'grandfather' = Luw., Hitt. *huhha-s*, Hier. Luw. *huh-*, L. *avus* 'grandfather' from PIE **hew-h-*.

²⁷ The Lycian inscriptions which had been found before 1932 were published in J. Friedrich 1932. Several more inscriptions were found thereafter. See O. Masson 1954: 439-440; Laroche 1974.

²⁸ Cf. Gusmani 1968b.

²⁹ Tritsch (1950: 515) adduces the following statistical data: the meaning of 20 words is completely defined because they are met in the bilingual texts; the meaning of some 20 words is quite well defined on the basis of the combinatory method; furthermore the meaning of 20 words is defined with great probability by the same method; the meaning of 40 other words can be derived from the context. Moreover, the meaning of some morphemes is also defined with great probability. Today, especially after the publication of the trilinguis from Xanthos, we know much more about the Lycian language.

³⁰ See Meriggi 1936a; J. Friedrich 1937: 440; Georgiev 1941: 50-51; Pedersen 1945; Tritsch 1950; Sturtevant and Hahn 1951; Meillet and Cohen 1952: 184, 205; Desnickaja 1952: 41, 45-46; Dunaevskaja 1954: 71-72; Kronasser 1956: 229, 254-255; Houwink ten Cate 1961; Neumann 1969; Laroche 1974.

³¹ See Bugge 1897; Meriggi 1936a: 258; Carnoy 1955: 216-217.

³² Cf. Tritsch 1950: 494-495; Goetze 1957: 181; Kammenhuber 1956: 20-21; Laroche 1957-67; Gusmani (1960a: 512) admits "that Lycian and Luwian represent two linguistic traditions and are closely related but, nevertheless, are completely autonomous"; Houwink ten Cate 1961: 51-54; Puhvel 1966: 238-239.

lada 'woman, spouse': Hier. Luw. *ta-ta-a-as* 'woman, spouse', Russ., Serbocroat. *lada* 'spouse', Old Czech *lada* 'virgin, maiden'.

nēni = Luw. *nani*- 'brother'.

tedi = Luw., Hier. Luw. *tati*- 'father'; Lyc. B. *tedesi*- = Lyc. A. **tedehi* > *tedd* 'father's' from *tedi*.

tideimi 'son, child' = Luw. *titai(mi)*- 'suckling', a derivative of Luw. *titai*- 'to feed', cf. *titani*- 'bosom', Lett. *dēls* 'son' from **d̥h̥(y)-lo-s*, OBG *dētē* 'child' from **d̥h̥(y)t-ent-*, Gr. *νδιπη* 'suckling-mother' from **d̥h̥d̥h̥(y)-nā*, Arm. *diem* 'to milk' from **d̥h̥(y)-*. The suffix *-mi-*, *-ma-* is used to form passive participles.

xahba 'progenies, child' ('grandchild, son-in-law' or 'son of a sister'?) from Luw. **has-* + suff. *-(i)bh̥eh* (?), cf. Hitt. *has(s)-* 'to give birth, to create', *hassa-* 'grandchild', *hassant-* 'born, son'; cf. Bulg. *rožbu* 'child' from **rodhy-ibh̥ā*, a derivative of **rodh-* 'to give birth, to create'.

(B) Numerals

tuweri 'two' from **d̥(u)w-*, for the formation cf. Lith. *penkeri* 'five', Russ. *pjatero*, Oscan *pūmpierais*, OIr. *cóicer* 'five people'; kbi, Mil. *tbi* 'two' (with *kb-*, *tb-* from *dw-*); *tupmme* 'double (?)'.

tri(s)- 'three' in *tris̃ni* 'three times', cf. L. *trini*.

kadr-(r̃na) 'four': L. *quadr-* 'four', *quaternus*.

nuñ- 'nine': L. *novem* 'nine'.

(C) Names of the parts of the body

pededi 'with the infantry', a derivative of *ped-* 'foot', L. *pēs* (gen. *pedis*) 'foot'.

(D) Various words

essti 'est' (or 'he puts'), *esste* 'erat'.

tāti, *tādi* '(he) puts' = Hitt. *daai-* 'to put'.

tuweti 'puts, erects, dedicates': Hier. Luw. *tu(wa)-* 'to put', OBG *staviti* 'to put'.

aiti, *adi*, *edi* '(he) does' from **a(y)a-*: Luw., Hier. Luw. *aya-* 'to do'.

pijeti '(he) gives' = Luw. *piya-* 'to give'.

tubeiti '(he) punishes' = Luw. *tupaiti* '(he) beats'.

xñte-wete (3rd pers. sing. pret.) '(he) led, directed', *xñta-wata-* 'chief, leader', cf. Hitt. *hant-ezzl-s* 'first', *hant-* 'ante' and *wet-*, cf. OBG *voždŭ* from **wod̥h̥yo-* 'leader'.

pr̃ina- = Luw. *parna-* 'house'; *pr̃ñezi-* 'Haus-stand', *pr̃ñawati* '(he) builds, constructs'.

esbe-di 'with the cavalry', a derivative of *esh-* 'horse' (borrowing): Skt. *aśva-*, Av. *aspa-* 'horse' from **ekwo-s*.

mahāna- = Luw. *massani-* 'god, goddess': *s* > *h*.

wedri 'town': Hitt. *wete-* 'to build, construct'.

(E) Pronouns

amu, *ēnu* 'I, me, to me', *ēmi* 'my': Hitt. *am(m)uk* 'I, to me, me', Luw. *-mu*, Hier. Luw. *amu* 'I', *ami(a)-* 'my', Lyd. *amu* 'I, to me'.

ti 'who' from **kwi-s*: Luw. *kwis*, Gr. *τίς* 'who'.

ti-ke 'someone', cf. L. *quis-que* 'anybody, somebody'.

ebe 'this' = Luw. *apa-*, Hitt. *apaa-* 'this, he'; acc. Lyc. *ebē* = Luw. *apan*; possessive adjective Lyc. *ahbi* = Luw. *apaassi-*.

(E) Prepositions

ñte 'inside' = Luw. *anda* 'in, inside', Hier. Luw. *a(n)ta*.

eri ? = Hitt., Hier. Luw. *arha* 'ex'.

hri, *hr-ppi* (*hrzzi*) = Luw. *sarri*, *sarra* 'super': *s* > *h*.

ēnē = Luw. *annan* 'under'.

per-ēpn = Luw. *parran*, *pari*, Hitt. *piran* 'in front of, before'.

epñ, epñ-te = Luw. *appa(n), appanda* 'post, re-', Hier. Luw. *apa(n)*.

(C) Particles

na 'non', *nì* = Luw. *nis* 'nē'.

-be in *se-be, ti-be* = Luw., Hitt. *pa-, -pa-*.

-ti = Luw. *-ti* (Hitt. *-za*).

Mil. *-ke* = Luw. *-ha* 'que'.

(H) Morphemes

-ā = Luw., Hitt. *-an* acc. sing.

-i, -ye = Luw., Hitt. *-i, -ya* dat.-(loc.) sing.

-h (*-ah, -uh, -eh*) = Hitt. *-(a)s* gen. sing.

-as, -is from IE *-ons, -ins* acc. pl.

-edi, -adi = Luw. *-ati* abl.-instr.

-ahi, -ehi, Lyc. B *-esi* = Luw. *-assi-* possessive suffix.

-(a)li- = Hitt. Luw. *-allaḷi*, possessive suffix.

-(e)ñni, -(a)ñna-, Lyc. B. *-evñni* = Luw. *-wanni-* ethnic suffix.

-wāti- = Hitt. *-want-*, suffix.

-ti, -di = Luw. *-ti*, ending for 3rd pers. sing. pres.

-(n)ti (cf. *tāti*) = Luw. *-nti*, ending for 3rd pers. pl. pres.

-xa, -xū = Luw. *-(h)ha*, ending for 1st pers. sing. pret.

-tu = Luw. *-tu*, ending for 3rd pers. sing. imperat.

-(n)tu (cf. *tātu*) = Luw. *-ntu* ending for 3rd pers. pl. imperat.

-s- = Luw. *-ss-* (Hitt. *-sk-*), verbal suffix.

The Luwian region included approximately the territories of Lycia, Pisidia, and a part of Cilicia.³³ The names *Luwīya*, *Lu-ū(-i)ya* and *Λύκιοι* is a derivative of *Avda* are genetically identical from the point of comparative-historical phonology. Laroche (1957-67: 79) proved that Hitt. *Lukka* 'Lycaonia, Lycia' corresponds to Luw. *Lui-* from an older **Luki-* since in Luwian *k* disappeared before a front vowel (see above). Therefore, the Lycian language is a late phase (a dialect) of development of (west) Luwian.

In the Lycian inscriptions there are several elements which indicate features of a *satəm* language. Thus, for instance, *esbedi* 'with the cavalry' is a derivative of *esb-* 'horse' from **ekwo-s*. Similar examples are found in the toponymy, cf. *Σίβκος*, the name of a river, which Kretschmer (1939: 257-259) connects with Arm. *surb* 'clean, saintly', cf. Skt. *śubhra-* 'bright'.

Kronasser (1956: 230) defines these words as Indo-Iranian borrowings.³⁴ This hypothesis is not acceptable because *esb-* 'horse', which preserves the IE vowel *e*, cannot be of Indo-Iranian origin. The vowel *e* shifted into Indo-Iranian *a* long before the second half of the 2nd millennium B. C., as can be seen from the Indo-Iranian borrowings in Hittite and from the proper names in some documents from the 2nd millennium B. C., cf. *satta* 'seven' in the compound *sattawarianna-* 'seven turns' in which the first *a* comes from *e* and the second *a* comes from *ṛ*. The existence of such examples in the toponymy excludes the hypothesis of borrowings from the language of a people that did not live in this region.

It seems more probable that there were two IE components in Lycian:³⁵ the first was probably the Lycian language, the descendant of West Luwian, while the second was probably Termilian, influenced by Pelasgian. On the

³³ Cf. Kronasser 1956: 15.

³⁴ Cf. Neumann 1961: 48, 52. See section 10.4.

³⁵ Cf. Kretschmer 1939.

whole there are reasons to believe that in Asia Minor (as in the Aegean region) different IE languages were mixed and layered on each other and that for this reason there were great changes in these languages even at such an ancient stage of their development.

In the "Lycian" inscriptions we do not find the name *Λύκιοι*: in these inscriptions the name of the people is *Trñmil-e*. The name *Tarmila* is recorded in a Babylonian document from about 422 B. C. Herodotus (I, 173, VII, 92), Strabo (XII, 573, XIV, 667, 678), Pausanias (I, 19, 3), Eustathius (D. Per. 857), and Stephanus Byzantius (s. v. *Τέρομερι*) inform us that the people which were called *Τερμίλι* or *Τρεμίλι* formerly lived in Crete but later migrated to Lycia where they were called Lycians.

Three of the "Lycian" inscriptions are in a specific archaic dialect called "Milyan".³⁶ According to ancient tradition, *Μιλῶν* (Hdt., etc.) or *Μίλως* (St. Byz.) were the original (autochthonous) inhabitants of Lycia who were later driven inland.

Therefore, the following conclusion may be drawn from the facts presented so far. During the 1st millennium B.C. Lycian was a mixture of two IE languages: Lycian, the direct descendant of Luwian, and Termilian, which was a Cretan pre-Greek language very closely related to Luwian. Although the linguistic material is extremely scarce, it can be assumed that Termilian was of Eteocretan origin, but also contained elements of a Pelasgian dialect (as a substratum in Crete). The facts, which unfortunately are not very certain, are the following:

(A) Consonant shift:

kbi-, Mil. *tbi-* 'two' < Pel. **twi-* < IE **dwi-*; *tuweri* 'two' from **d(u)w-*.

kbatra 'daughter' < **twathr-(a)* < Pel. **tugath(r)-* < PIE **dhught(r)-*: *-g-* > *-γ-* > *O*.

(B) Assimilation of the 'palatals':

esbe-di 'with the cavalry' from **ekwo-*.

-tāta = Gr. *-νορία* from **-kont*: *k'* > Pel. *ḫ*, written *t*, cf. *aitāta*, *nuñtāta*, *sñta*.

(C) Delabialization of the labiovelars:

-ke = L. *-que* 'and' but Luw. *-ha*, Hitt. *-ya* 'que'.

kadr-(ñna) 'four' < IE **k^wot(w)r-*: *tr* > *dr*, cf. L. *quaterna*; but Luw. *mauwa*, Hitt. *meu-* 'four'.

In Termilian some late changes took place, for instance: *-t-* > *d* (= *d*), *-tr-* > *-dr-*, *a* > *ä* > *e* (umlaut), *-w-* > *-b-*, *-s-* > *h*, *sw-* > *hb-*, etc.

6.5. Lydian

In Homer we find the name *Μήϊες* (and *Μηϊονία* for the region), while *Λυδοί* (*Λυδός*) appears from the time of the Lesbian poets onwards: this rather late appearance of the classical name of the Lydians is confirmed by Herodotus (I, 7) and Dionysius Halicarnassensis (I, 28) who mention a change in the name of this people from *Μήϊες* to *Λυδοί*.³⁷

The name *Λυδοί* is of IE origin: *-ū-* comes from *ew* or *ow* as in Hittite, so that *Λυδοί* from **lewdu-* is genetically identical with OHG *liut*

³⁶ See Meriggi 1936a: 280. — *Μιλῶν*, *Μίλως* is probably a totem name, cf. L. *milvus* 'Weihe, Gabelweihe'.

³⁷ Cf. Gusmani 1960b: 334.

'people, man', pl. 'people', OBG *ljudü* 'people', *ljudiže* 'people', cf. the semantic parallels OHG *diutisc*, G. *Deutsch(e)* from OHG *diot(a)* 'people'.

Herodotus (I, 6-7) says that the Lydian dynasty of the Mermnadians, founded by Gyges (687-652), were the descendants of the so-called Heraclidans, who ruled for 505 years; the dynasty of the Heraclidans was in turn preceded by the dynasty of the Attiadans, whose founder was *Μάωνης*. This conforms to the fact that the fall of the dynasty of the Attiadans and the beginning of the reign of the Heraclidans had taken place about 1192 B. C., a date which coincides with the Aegean invasion in Asia Minor. The name of the first Lydian king, *Μάωνης* or *Μασώνης*, is = Luw. *massana/i*- 'god'. Gusmani (1960b: 333) writes: "Considering all this, it may be possible to assume, as Bossert does, that during the second half of the 2nd millennium B. C. Lydia was owned by 'Luwians' (in a wide sense) who formed the ruling class. And this historical period coincided with the reign of the dynasty of the Attiadans...; at the time of the Aegean invasion during the 12th century B. C. most probably invaders of Balkan origin must have penetrated into Lydia..."

We know of about 70 Lydian inscriptions from the 7th to 5th century B. C.³⁸ As was already mentioned, the IE character of Lydian was proved in 1935-36 by Meriggi (1935; 1936b).³⁹ Later Sommer (1947: 32-33) and Kammenhuber (1956: 11; 1959c: 12) expressed the opinion that Lydian was related to Hittite.⁴⁰ This hypothesis was completely proved by Carruba.⁴¹ In my opinion Lydian is a late (West) Hittite dialect with some influence from Luwian and from other languages from western Asia Minor (Mysian, Phrygian, Greek, Iranian). The following are some examples of this:

(A) Vocabulary

aara- 'yard (hof, Gut)': Hitt. *har(k)-* 'to hold, have'; for the semantic evolution cf. G. *Habe*.

afariš 'document for sale': Hitt. *happar-* 'to sell'.

āniēt '(he) orders': Hitt. *hand-* 'to order'.

ata- = Hitt. *atta-s* 'father'.

βασόδρα *χρὸν διαρροιακὸς ποδίμης*: Hitt. *wassuwar* 'clothing'.

bi- = Hitt. *paai-* 'to give'.

bira- = Hitt. *pir* 'house'.

bīta 'to drag': Hitt. *peda-* 'to take away'.

ca- = Hitt. *daai-* 'to put'.

citoiš 'seal' (?): Hitt. *siyattalliya-* 'to seal'.

civš = Hitt. *siu-s* 'god'.

dumniš 'community': Phryg. *δομος* 'council, meeting', Gr. *θωμός* 'heap'.

fa-karsed 'harming': Hitt. *kars(iya)-* 'to cut'.

fa-korfid 'harming': Hitt. *karp(iya)-* 'to take away'.

i- = Hitt. *iya-* 'to make'.

καὺς (Hipp.), *kavēs* 'priest': Skt. *kavi-* m. 'wiseman, poet', Gr. *θεο-οζόος* 'sacrificing priest'.

λαλίας *ὁ ὑφ' αὐτοῦ ἐπὶ Λυδῶν* (Hesych.): Hitt. *lahhiyala-s* 'hero (soldier)'.

³⁸ See Gusmani 1964: 250-270; 1963a.

³⁹ See also Kronasser 1956: 231-232, 225; Heubeck 1959b; 1969.

⁴⁰ See also Zgusta 1955: 541-542.

⁴¹ See also Gusmani 1964.

lalēns 'speaking': Hitt. *lalaai-* 'to speak'.

qira = Hitt. *kuera-* 'field'.

ser-li-s ('upper') > 'superior, power': Hitt. *ser* 'up'.

tavšaš 'strong, big': Gr. *ταῦς μέγας, πολὺς*.

u- = Hitt. *(a)u(s)-* 'to see'.

vc-ba-qēnt 'destroyed': Hitt. *kwen-* 'to beat, kill'.

vešfaš = Hitt. *wez(za)pant-* 'old'.

(B) Pronouns

amu = Hitt. *am(m)uk* 'ego, me, mihi'.

ēmis 'my': Gr. *ἐμός* 'my'; *ēmī* oblique case = Hitt. *ammel* gen.

qis = Hitt. *kwis* 'who'.

qisk = Hitt. *kwiski* 'quisque'.

aiāš 'alius': L. *alius*.

ešš 'hic', *est* 'hoc': L. *iste, istud*.

-(i)š 'is', *-aṽ* 'eum', *-ad/t* 'id' = Hitt. *-as* 'is', *-an* 'eum', *-at* 'id' (enclitic demonstrative pronoun).

(C) Adverbs, conjunctions, particles

ebad = Hitt. *apatta* 'there'.

kud = Hitt. *kuwatta* 'where'.

kot 'how, what, since (?)' = Hitt. *kuwat* 'why', L. *quod*.

ēnt- = Hitt. *anda* 'in'.

-m = Hitt. *-ma* 'but'.

-k = Lyc. *-ke*, L. *-que* 'and'.

na(m) = Hitt. *namma* 'afterwards'.

fa- = Pal., Luw. *pa-*, Hitt. *-(a)pa*, particle.

(D) Morphemes and suffixes

-š (-s) = Hitt. *-s* nom. sing.

-ṽ = Hitt. *-n* acc. sing.

-d = Hitt. *-d* nom. acc. n.

-(a)š = Hitt. *-es* nom. pl.

-a = Hitt. *-a* nom. acc. pl. n.

-i dat.-loc. sing. = Hitt. *-el* gen. (pronominal).

-a dat. pl. = Hitt. *-an* gen. pl.

-v, -(n)u = Luw. *-wi* 1st pers. sing. pres.

-d/t = Luw. *-ti* 3rd pers. sing. pres.

-(n)t/d = Luw. *-(a)nti* 3rd pers. pl. pres.

-(n)ṽv = Hitt. *-(n)un* 1st pers. sing. pret.

-dṽ = Hitt. *-t(a)* 3rd pers. sing. pret.

-aṽ = Hitt. *-anna* inf.

-ā(n)š, -ēnš = Hitt. *-anz* pres. part.

-l inf., (past) part., and pret. (3rd pers. sing.), cf. the Slavic part. and pret. in *-l*, Arm. inf. in *-l*.

-to- part.

-(a)li- (patronymic suffix) = Etr. *-al*, Hitt., Luw. *-al(l)a/i-*.

*

A certain number of words in the Lydian and Lycian inscriptions remain unclear. Of course, this does not mean that they are not of IE origin. Nevertheless it could be assumed that a number of them, as in Hittite and Armenian, might be of Hattic, Hurrian, or Caucasian origin. But it has to

be kept in mind that not all the non-IE elements in Lydian have to be of Caucasian origin: Semitic (Assyrian, Arameian) had exerted a certain influence on the languages of Asia Minor.

6.6. Carian

Having established the IE origin of the ancient languages of Asia Minor — Hittite, Luwian, Hieroglyphic Luwian, Palaic and their later descendants Lycian and Lydian — the opinion that Carian is also an IE language becomes quite probable *a priori*.

There are about one hundred Carian inscriptions,⁴² most of which are quite short. The majority of them (at least 85) were found in Egypt: they were written by Carians who were in the service of the Pharaohs. They are from Abu-Simbel, Abydos, Thebes, and other places. Only 16 inscriptions were found on Carian territory: these are very important since they are the longest texts. There is also a short Greek-Carian bilingual text from Athens; lastly there are several short inscriptions on coins and some fragments of no importance. The texts from Egypt are from the 7th-6th centuries B. C., while the ones from Caria are probably from the beginning of the Hellenistic period. The Carian inscriptions have not as yet been deciphered. Ševoroškin's attempt (1962; 1964a; 1964b; 1965) to decipher these inscriptions, which he considered to be written in a language of the Hittite-Luwian group, cannot be considered to be conclusive.

We do, however, have a certain number of Carian glosses and proper names⁴³ which enable us to draw certain conclusions about Carian. The etymological interpretation of some Carian words makes it possible to prove the IE character of the Carian language. Carian belongs to the Hittite-Luwian group.⁴⁴

6.6.1. The Historical Phonology of Carian

IE *o* > Car. *a* as in Hittite.

(Secondary) *ā* > late Car. *-o*, cf. Car. *Κρησσω* = *Cressa*.

Car. *u* is usually written in Greek as *o* since Att. (Ion.) *v* had already shifted into *ū*.

IE *aw* (*ow*) > Car. (*o* ? or) *u* as in Hittite.

IE *ew* > Car. *u*, before a vowel *o*(*w* ?).

There was a late contraction of vowels: *ea* > *ē*, *oa* > *ō*, as in Greek.

PIE laryngeals are partially preserved: they are represented in Greek by the letters *κ* or *γ*; in intervocalic position they probably (later ?) disappeared.

IE *w* shifted into *β* (= *b* ? as in Lycian) but before an *o* and in intervocalic position it disappeared (as in Greek dialects).

⁴² See Deroy 1955; J. Friedrich 1932: 90-101; Masson and Yoyotte 1956-57; Heubeck 1959a: 332-333; Treu 1955.

⁴³ See Brandenstein 1935; Heubeck 1959b.

⁴⁴ See Garruba 1965: 558; Neumann 1967: 28; Ševoroškin 1968; Georgiev 1975a.

There was a consonant shift with frequent fluctuation between a voiceless aspirate and a voiceless stop (before a vowel), as well as between a voiceless and an (intervocalic) voiced stop.

There was a delabialization of the labiovelars.

Secondary changes: *nt* > *nd*, *nk* > *ng*, *np* > *mb* as in late Greek, Pamphylian, Phrygian, and Armenian; (*m*)*pn* > *mn*, *sk* > *ξ*, cf. IE *sk* > Arm. *ε*; *ly* > *ll* or *ld* as in modern Greek dialects of the eastern Sporades (Carian substratum?), cf. dial. Mod. Gr. *ἄλδος* = *ἄλλος* 'other' from **alyo-s*. Here *y* (at least in these dialects) shifted into *d* (or *ḍ*), cf. IE *y* > Gr. *ξ*-, dial. *δ(δ)*, L. *y* > Ital. *dž*- (L. *iam* > Ital. *già*), etc. Or *ll* > *ld* through dissimilation.

6.6.2. The Formation of Carian Names

The possessive suffix *-assi-*, *-assa*, which is known from Hittite-Luwian, is also found in Carian. This suffix appears, for instance, in the following Carian place and personal names:

Ονασσοσ '(the town) of *Ονας*'.

Ονασσασσις 'belonging to *Ονασσοσ*'.

Σαμασσις from *Σάμος*.

Ιμβρασσις from **Ιμβρος*.

The possessive suffix *-(ē)li-*, which is known from Lydian, is also found in Carian, cf. *Πισωνδηλις* m., a personal name (5th century B. C.) 'Pisidian'. The same suffix is found in all Hittite-Luwian languages.

The suffix *-oa-* in the Carian personal names *Ναννοας*, *Βαβοας*, *Καδοας*, meaning 'the son of *Ναννας*, *Βαβας*, *Καδας*', probably corresponds to the Slavic possessive suffix *-ovŭ* from *-ewo-*, cf. Bulg. Russ. *Ιvan-ov* 'son of Ivan'.

The suffix *-ομνωσ* is = Hitt. *-umna-*: Car. **Εκατόμνωσ* = Gr. **Εκαταῖος*, cf. Hitt. *palaumna-* 'man from Pala, Palaian'. This suffix is related to the Hier. Luwian *-wana-* which is of IE origin, cf. Goetze 1954b: 325; Laroche 1956: 26.

The suffix *-αλλης*, *-αλλος*, *-ωλ(λ)ος*, *-ωλδος*, which is used to form *nomina agentis*, appears in the following words and proper names:

μεζάλλης 'brigand'.

νσο-ωλλος 'soldier with a spear' from *ῥσός* 'spear'.

Παρα-νσοωλ(λ)ος 'fighting forward with a spear'.

Σαο-νσ(σ)ωλλος 'fighting upwards with a spear'.

Μα-ύσ(σ)ωλ(λ)ος 'soldier (fighting with the spear) of the goddess *Mā*'.

This suffix is derived from *-ālo-* or *-āl-yo-*: *ly* partially shifted (in some dialects) into *ld* and *ā* into *o* so that we also find the form *-ωλδος*. The Carian suffix corresponds exactly to the Hittite suffix for *nomina agentis* *-al(l)a-*, *al(l)i-*.⁴⁵

The stems of the words and proper names mentioned above have exact correspondences in Hittite.

⁴⁵ See section 6.2.2 and Van Brock 1962: 87-88.

These facts indicate the close relationship between Carian and Hittite-Luwian. This is also confirmed by the etymological analysis of Carian words.

6.6.3. The Carian Vocabulary

The Carian (or Phrygian) word *γίσσα* 'stone', which is preserved in Stephanus Byzantius, is found in the Carian place name *Μονόγισ(σ)α* (St. Byz.). Carian *γί(σ)σα* is related to G. *Kies* from IE **giso-*.

The word *κῆξ-άλλης* 'brigand' (Democr.), which is considered to be Carian, is related to Hittite *kisk-* 'to comb, to fight': it is a derivative formed by the Hittite suffix *-al(l)a-*. The phonetic shift *sk > ξ* is similar to the phonetic shift *sk > c* in Armenian. Cf. Neumann (1961: 64), who considers *κῆξάλλης* to be a Lydian word.

The Carian personal name *Κόλ-ωλδος* is probably derived from **hul-āl-y(o-s)* or *-āl(o-s)* 'soldier' and comes from Hitt. *hull-*, *hulliya-* 'to fight', *hullatar* (*r/n-stem*) 'military force'.

The Carian word *kombi-* corresponds to Lydian *καμβειν* and to Cappadocian *kanpsi-*. The meaning of the Lydian word is established on the basis of the inscriptions from Giordis in Lydia: *ἡ μάμμη τὸ καμβειν* 'the grandmother (greet) the small (= young child)'; Lyd. *καμβειν*, Car. *kombi-*, and Cappadocian *kanpsi* are related to Hitt. *kappi-* 'small, young', cf. Neumann 1961: 61.

Car. *κύβωνδης* (*-ος*, *κύμινδης*, *κόμινδης*), a kind of owl (*Iliad* XIV, 291, Ar., Plato) is derived from **kuyw-ent-* 'shouting', cf. OHG *hūwo* 'owl', Skt. *kāuti* 'shouts'; *-β-* (*-μ-*) is a substitute for the spirant *ḃ* or *w*—*n > β—ν* respectively *μ—ν*).

On the basis of the personal names *Κυτβ-ελημυς* (5th century B. C.) 'one who loves extermination' and *Κτουβ-ωλδος* (5th century B. C.) 'soldier of extermination' Brandenstein established a Carian noun *κυτβ-* or *-κτυβ-* 'extermination' which may be compared with Lyc. *ktbb-* 'extermination'.

The Carian word *κῶς* ' πρόβατον, sheep' (Athen.) is derived with the shift *aw > ὄ* from **hawis < *hawa-s* = Hier. Luw. *hawa-s*, Lyc. *xawa-* 'sheep' from PIE **xew-*.

Car. *κοῖον* ' πρόβατον' (schol. *Iliad* XIV, 255) is a derivative of *κῶς*.

Λωνδαργος, an epithet of the Carian Zeus,⁴⁶ is derived from (Hitt.) **lahhan* (gen.) or *lahhiyanni tarhanz* 'victorious in battle', cf. Hitt. *lahha-* 'march, war', *lahhiyatar* n. (*r/n-stem*) '(military) march', dat.-loc. *lahhiyanni* and *tarh-* 'to be victorious, to be powerful': **lahhan-tarh-anz* or **lahhiyannitarhanz > *Lān-tarhaz* (contraction and syncope), later **Lōndarhaz* = *Λωνδαργος*. Cf. *Ζεὺς Νικηφόρος*, *Ζεὺς Στρατηγός* from Caria.

Μαύσωλος (also *Μανσωλός*, *Μανσ(σ)ωλλος*, *Μανο(σ)ολλος*), the name of two Carian kings (attested since the time of Hdt.) who were especially well known due to the tombstone in Caria *Μανσώλειον*, meaning 'soldier (fighting with the spear) of the goddess *Mā'*, is derived from *Mā* 'mother(-earth)' and *νο(σ)ωλ(λ)ος* 'soldier (fighting) with a spear' (see below); *Mā* was a goddess worshiped in Asia Minor.

⁴⁶ On *Λωνδαργος* see Laumonier 1958: 202, 218-219, 260, 278, 714.

⁴⁷ Ὀσογῶ(ς) or Ὀσογῶα is an epithet of Zeus in Mylasa in Caria (Paus, Strabo; gen. Ὀσογῶ, Ὀσογῶν, Ὀσογῶα).⁴⁷ The Carian name was explained in ancient times as Ζηνο-ποσειδῶν (Athen., Eust.). Kretschmer (1926: 14) and Brandenstein explain it as '(the god) of the sky and the sea'. In this case the Carian name *us-(w)ōgu- or *os-(w)ōgu- from *us-wōgh-u- or *āus-wōgh^h-u- is a compound word: *us- or *āus- (respectively *āusōs) 'light, brightness, dawn, sun' is related to Skt. us- or usāh 'dawn', Hom. ἠώς, Att. εἰώς (*āusōs) 'dawn', ἡ-κανός 'cock' (ἡ- from *āusi-), literally 'singing at dawn', Sabinian ausel 'sun'; *wōgh(u)- 'sea' is related to Goth. wēgs m. 'storm, pl. waves', Norse vāgr m. 'sea', OHG wāg 'turbulent water', G. dial. Wog m. 'sea', G. Woge 'wave' from *wēgh^ho-.

The Carian word -ογω- instead of *ωγω- 'sea' had a correspondence in pre-Gr. Ὠγήν (Hesych.), Ὠγηνός, Ὠγηῆνος (Clem. Al., Origenes), Ὠγενος (also Ὠγενός, Lycophr., St. Byz.) which is explained in Stephanus Byzantius as a god = Ὠκεανός. Furthermore, Ὠγενίδα is explained in Hesychius as = Ὠκεανίδα.

The Carian personal name Παρᾶ-νσσῶλ(λ)ος⁴⁸ means 'fighting forward with a spear', cf. Hitt. paraa 'forwards, outside; on the other side, far' and νσσῶλ(λ)ος (see below).

The personal name Σα-μονος is explained by 'πρόθυμος': -μωνος 'θυμός' is = Hitt. muwa- 'juice of the body, essence of the soul(?)', Luw. muwa- 'power, strength'.

The Carian personal name Σαρ-νσ(σ)ῶλλος⁴⁹ means 'fighting with the spear upwards', cf. Hitt. saraa 'up, above', and -νσσῶλ(λ)ος.

Sinuri is a Carian god who is closely related to σωτήρες θεοί (protecting gods). The Carian name is derived from *siun-warri 'god's help,' cf. Hitt. siun- 'god' and warri 'help': wa > u as in Hittite, cf. Hitt. urr-ir 3rd pers. pl. pret. from war- 'to help'.

Stephanus Byzantius informs us that Σουάγγελᾶ, a town in Caria where the tomb of Car is located, meant 'grave (tomb) of the king': in Carian σοῦαν meant 'grave (tomb)' and γέλων 'king'. In Strabo (XIII, 611) the same town is called Σνάγγελᾶ and the ethnicon is found in inscriptions as Σναγγελεῖς. In Stephanus Byzantius the name of a Carian town Θεάγγελᾶ is also given, the ethnicon of which, Θεαγγελεῖς, is found in Athen. 6, 211 b. In the inscriptions we also find the forms Θναγγελεῖς, Σφαγγελιαῖος. Θεάγγελᾶ represents a partial Greek translation of the Carian place name Σ(ο)νάγγελᾶ: in the first part of this compound word we can discern the Greek word θεός 'god'. Therefore, Stephanus Byzantius has given the exact meanings but he has changed their places. Car. Σνά-γγελᾶ, Σουά-γγελᾶ = *Siwan-gela is a compound word = Hitt. *siw-an gen. pl. of siu-s 'god' (or siwann- 'god') and Etr. ceta 'grave (tomb)', L. cella; cf. the shift nk > ng in late Greek and in Armenian. The meaning of Σουάγγελᾶ is 'tomb of a god' or 'tomb of the gods' since after a king died he was worshiped as a god.⁵⁰ According to O. Carruba (1965: 558), Σουάγγελᾶ comes from Hitt. *hassuwanhila-: hassu- 'king' and hila- 'yard'.

⁴⁷ See Laumonier 1958: 40, 44, 46, 58, 66, 69, 101-103.

⁴⁸ Cf. Sundwall 1950: 37.

⁴⁹ Cf. Sundwall 1950: 40.

⁵⁰ Cf. Gurney 1952: 65.

Συννία, a festival in the sanctuary of the Carian god Sinuri, is = **si-wanniya-* '(holiday) of the god'; for the formation cf. Hitt. *ispant-iya-* 'nocturnal' from *ispant* 'night', *istarnija* 'middle' from *istarn* 'middle'.

The Lycian-Carian word *τάβα* 'stone, rock' (St. Byz.) is derived from *(s)*tā-b^hā* (or -o-s) and corresponds to OPruss. *stabis* 'stone', Lett. *stabs* 'column' from **stābhⁱ-s*, OHG *staben* 'to be petrified', Sabinian *teba* 'hill', L. *Taburnus mons*, Oscan *Tifāta*, the name of a mountain and of a town in Campania (Italy), from *(s)*tēbhā-tā* (*ē* > *i* and -*b^h* > -*f* are regular phonological changes in Oscan). The pre-Greek toponyms *Θῆβαι* (Boeotia; Thesaly) and *Θῆβη* (Troas) from *(s)*tēbhā* are from the same origin. The same word is found in the stem of the following place names of Asia Minor: *Τάβαι* (1) a town in Caria on the border with Phrygia, (2) a town in Lydia, (3) a town on the island of Rhodos, (4) a town in Cilicia, *Ταβηνόν πεδίον*, a plain in Phrygia, *Τάβαλα*, a town in Lydia (from *(s)*tābhā-lo-*).

The Carian word *τυμνία* 'ξάβδος' (St. Byz.) is derived from **tu(m)p-niā* and is related to Luw. *tup(a)i-* 'to beat', Lyc. *tubeiti*, *tubiti* '(he) punishes', Skt. *(s)tumpati* '(he) hurts', Gr. *τύπτω* 'to beat', *στυπος* 'stump, stem': phonetic shift *(m)p(h)n* > *mn*. The Carian place names *Τύμνος*, *Τυμνησ(σ)ός* and the Carian word *τυμνισσός* 'stick, shepherd's crook' come from the same stem.

The Carian word **υσσωλ(λ)ος* 'fighting with a spear', which is found in the Carian personal names *Υσσωλλος*, *Υσσωλδος*, *Μα-ύσ(σ)ωλ(λ)ος*, *Παρα-υσσωλ(λ)ος*, *Σαρ-υσ(σ)ωλλος* is a derivative of *ύσσός* 'spear' through the suffix which forms *nomina agentis* -*al(y)o-*. The Greek word *ύσσός* '(small) spear' (Polyb., Plut.) is explained by Bechtel (1906) as being Carian on the basis of the Carian personal names mentioned above: *ύσσός* is derived from **ud^h-yo-s* and is related to Gr. *ἔθειρ φθείρει* (Hesych.), Skt. *vadhati* '(he) slays, kills' *vadhar-* n. 'weapon', Hitt. *huuda-* 'agileness, readiness for fighting (war) (??)' from PIE **wed^h-*, **ud^h-*.

6.7. Other Less Known Indo-European Languages of Asia Minor

6.7.1. The Inscriptions from Side in Pamphylia

There are several short inscriptions from the town of Side in Pamphylia which were investigated by Bossert (1950) and Heubeck (1956: 8-9).⁵¹ The language of these inscriptions is related to the other IE languages from Asia Minor and more specifically to Hieroglyphic Luwian, Lydian, and Lycian. The most important bilingual text from Side is:

pulunio purdurs pulunioars masara eo...

[*Α*]πολλώνιος Ἀπολλοδώρου [ε]οῦ Ἀπολλωνίου ἀνέθηκεν [εἰ]κόνα τῆδε αὐτοῦ θεοῦ πᾶσι

The features which characterize this language (dialect), which was in a process of Hellenization, are the following:

pulunio = Gr. Ἀπολλώνιος, nom. -o- (probably for -u-)stem without an -s. This feature is typical of Lycian.

purdurs = Gr. Ἀπολλοδώρου, the ending for the gen. -s. The dropping of an initial *a* is a phonetic feature which is also characteristic of Albanian and Modern Persian, cf.

danpiu = Gr. Ἀθηναίωνος.

⁵¹ Cf. also Brandenstein 1958: 80-81.

6.7.2. The Pisidian Inscriptions

The so-called Pisidian inscriptions were investigated by Shafer (1950). Despite the results of Shafer's study, Sundwall (1950: 47) maintains the view that there are only proper names in these inscriptions (1950: 47).⁵² Zgusta (1963) has demonstrated that Pisidian is related to Lycian and Luwian.

6.8. *The Cypro-Minoan and "Eteo-Cyprian" Inscriptions*

The archaeological discoveries during the last thirty years considerably enriched the number of the so-called Cypro-Minoan inscriptions. They are written in syllabic script which is a local variant of the Cretan Linear A or of its archetype.

In 1941 Daniel (1941) published the 185 inscriptions known at that time: one inscription containing eight signs, 13 inscriptions containing three to four signs, and the majority containing only one sign. Previous to 1952 about 50 new inscriptions were revealed as a result of archaeological excavations, but the majority of these inscriptions contained only one sign.⁵³ The most important inscriptions were found after 1952. O. Masson (1956; 1957b) classified them in chronological order in the following groups.

(a) The Old Cypro-Minoan period: fragment of a slab found in Enkomi in 1955. Dikaïos believes that this fragment is from the 16th century B. C. Thus it belonged to almost the same period as the Cretan inscriptions in Linear A: some of the signs of the inscription from Enkomi look like the signs of Linear A.

(b) The Middle Cypro-Minoan period (15th-13th centuries B. C.): about 25 clay balls from Enkomi with one or several words on them and other short texts from the eastern part of the island, mostly from Enkomi.

A tablet and two fragments found in 1953-55 in Ras-Shamra (Ugarit) in Syria should be added to this group. These documents belong to the 14th-13th centuries B. C.

(c) The Late Cypro-Minoan period: three large fragments from Enkomi, probably from the end of the 13th century B. C. The longest fragment consists of 22+16 lines:⁵⁴ about 56-57 different signs are used. This is the most important Cypro-Minoan inscription.

(d) The Early Iron Age (final Cypro-Minoan, 12th-11th centuries B. C.): mostly copper ingots from Enkomi.

Sittig (1954; 1956b) tried to decipher the most important inscriptions from Enkomi. In his opinion they are written in Greek but his decipherment cannot be considered as conclusive.⁵⁵

In addition to the Cypro-Minoan texts, there are some other inscriptions from the 7th to the 4th century B. C. in the so-called "Eteo-Cyprian" script: they were published by J. Friedrich (1932: 49-52). Some other inscriptions which are considered to be Greek should be added to them, because their interpretation on the basis of the Cyprian Greek dialect from

⁵² See also Zgusta 1957.

⁵³ Cf. Mitford 1952; Ventris 1952.

⁵⁴ See Dikaïos 1953a; 1953b; 1956. See also Meriggi 1973.

⁵⁵ See Meriggi 1956a: 194-195; O. Masson 1956: 200-201; 1957b: 87.

the classical period is not convincing.⁵⁶ The attempts to explain the "Eteo-Cyprian" inscriptions, including my attempt (1936-38: 189-190) and that of von Blumenthal (1937: 240-241), cannot be considered to be successful.

The "Eteo-Cyprian" texts were published by the French linguist O. Masson (1953) in excellent photographic reproductions.⁵⁷ This book is an important step toward further investigation since it shows that the majority of the previous publications of these texts are of no use. For instance a sign, *se*, was thought to exist in the endings and on this basis the suggestion was made that there was some connection between the language of this inscription and Hurrian. Now, however, it is clear that this sign does not exist in these inscriptions at all.⁵⁸

The Cyprian dialect from the classical period belongs to the Arcado-Cyprian group. The Cypro-Minoan and the "Eteo-Cyprian" texts are not yet deciphered.

6.9. *Indo-European or Non-Indo-European?*

We have now arrived to a basic problem, namely, if certain texts such as for instance the Dreros inscription, have not yet been convincingly interpreted with the help of IE languages, are we justified in considering these texts to be non-IE, though no other language has given a satisfactory explanation? Formerly it was natural to assume that if a given text could not be explained on the basis of ancient well-known languages such as Greek, Sanskrit or Latin, then it should be assigned to the non-IE languages. It used to be thought that during the 1st millennium B.C. the IE languages could not have differed very much from each other. For this reason the languages of the so-called "Eteo-Cretan" inscriptions from Praesos and Dreros, the "Eteo-Cyprian" inscriptions, the inscription from Lemnos, the Etruscan texts, etc. were considered to be non-IE. This practice was also decisive in etymological investigations: if a word belonging to an IE language could not be satisfactorily explained through comparisons with words in other IE languages, many scholars did not hesitate to declare it to be non-IE.

Such conclusions are erroneous. Each IE language has its own specific peculiarities. When we are confronted with isolated texts (e. g., short inscriptions) which are partially damaged or written without spaces between the words (*scriptio continua*), which have unknown contents, and which are written in a scarcely known or unknown language or dialect, and when in such texts, due to their content, the most ordinary IE words are not found or considerable changes have taken place in the phonematic structure of the language, we have no right to consider the lack of a convincing interpretation as evidence for the non-IE origin of that text. This pertains especially to the southern IE languages about which we know very little.

There are sufficient examples to confirm this conception. In 1902 Knudtzon correctly concluded that the so-called "Arzawian letters" were written in a specific IE language. But Knudtzon's conclusions were accept-

⁵⁶ See Mitford 1952: 152.

⁵⁷ See also E. Masson 1972.

⁵⁸ Cf. Meriggi 1956a.

ed only after Hittite was deciphered. If we did not have the Indic originals of the Tocharian translations at our disposal, these texts could hardly have been understood and it would most probably have been impossible to define the IE character of the Tocharian language. Many Gallic inscriptions are still unintelligible despite the fact that Celtic is comparatively well known. The inscription from Ezerovo is correctly considered to be Thracian but many linguists do not accept its interpretation.

Unfortunately, the comparative-historical method is often not in the position to help us explain with absolute certainty texts which have unknown contents and which are written in a little known language. This method is successful only when it is applied to texts written in very closely related languages — such as, for instance, Avestan and Sanskrit or Umbrian and Latin — or in languages without considerable phonematic changes. If, for example, we did not know Latin and the other Romance languages, and if we had used only the comparative-historical method, we would have been able to understand almost nothing of a French text written in phonetic orthography, and it would have been very difficult to establish that French was an IE language.

The same applies to etymological research. Undoubtedly there are borrowings of non-IE origin in all the IE languages: there are no “pure languages”. But the lack of a reliable etymology for a word in an IE language does not mean that it is of non-IE origin. There was a time when, under the influence of the theory of the non-IE character of the pre-Greek language, many Greek and Latin words were defined as non-IE.⁵⁹ Typical examples of this are Gr. *οἶνος*, L. *vīnum* ‘wine’: under the influence of the dominant theory these words were declared to be borrowings from a hypothetical pre-IE substratum in Greece and Asia Minor; then, on the basis of the hypothesis of a relationship between the Caucasian and pre-IE “Mediterranean” languages, some scholars considered these Greek and Latin words to have been borrowed from a pre-IE word related to Georgian *γvino*. Today the IE origin of these words is beyond doubt (see section 11. 4. 1).

6.10. *Hydronymic Data on the Ethnic Situation in Western Asia Minor*

The place names in Asia Minor have not been sufficiently investigated until now because for a long time Asia Minor was considered to be a non-IE region. It is now obvious that western and south-western Asia Minor have been inhabited by IE tribes and peoples since the most remote times.

⁵⁹ Cf. Laroche 1950: 65: “... la doctrine issue du livre de P. Kretschmer, *Einleitung* 1896, a commandé pratiquement toute la grammaire comparée pendant un quart de siècle et est demeurée, surtout en France, le dernier mot de la linguistique officielle jusque vers 1930. Réduite à sa proposition essentielle, la théorie kretschmérienne niait la présence de langues indo-européennes en Asie Mineure avant l’iranisation et l’hellénisation du pays, en même temps qu’elle posait le caractère original, *sui generis*, des résidus transmis par la tradition classique, et que l’on rassemblait sous le vocable commode d’asianique. Cette théorie a eu pour conséquence directe, et, disons-le, funeste la floraison d’hypothèses nombreuses, mais incontrôlables, sur la parenté possible des idiomes asianiques avec les deux mondes limitrophes caucasique et égéen ou préhellénique, puisque aussi bien la mode interdisait alors d’y rechercher les affinités indo-européennes ou sémitiques.”

Thracians, Mysians, and Phrygians lived in north-western Asia Minor. The Phrygians occupied a great part of western Asia Minor. Maeonians, Lydians, Lycians (Termilians), and Carians spoke IE languages.

The IE character of the ancient population of western Asia Minor is also confirmed by the analysis of the place names and especially of the hydronyms.

In interpreting the river names in this region we shall make use of the principle of pseudo-translation (see section 4. 1): the modern Turkish names of these rivers will be used as the basis for this interpretation. Below are several examples which illustrate the principles which will be used in interpreting these names.

The river mentioned by Homer, Σατνιόεις, later Σαφνιόεις, is called *Tuzli-çay* 'salt river' in Turkish. The Turkish name helps us to establish the etymology of the ancient name. Σατνιόεις is derived from **sattniowents*, a proto-Phrygian or proto-Armenian form derived from IE **saldnio-wents* 'salty'; cf. Arm. *att* (*t=γ* or *ω*) from **saldi-*, OBG *slanū* 'salty' from **sald-no-s*. In Greek this foreign name sounded approximately like **ΣαF-τνιοFε(τ)ς*, from which came Σατνιόεις in Homer (with simplification of the foreign consonant cluster) and Σαφνιόεις in late Greek with *Fτν* > *τν*, *φτν* > *φν*; Σατνιόεις and Σαφνιόεις are therefore two forms of the same name which was borrowed at different times and in different dialects.

The Μαίανδρος and Κάνστρος Rivers are called *Büyük Menderes* 'Big Menderes' and *Küçük Menderes* 'Small Menderes' in Turkish. The Turkish names help us to explain the ancient names: Μαίανδρος is derived from Hier. Luw. *maya(n)l-* 'numerous, big' (from **maki-*, see Laroche 1963: 78, or from IE **māi(y)ōn* 'bigger') and IE **drowo-s* or **srowo-s* 'river'; and Κάνστρος from **kaḥ(i)-* (+*yōs*?) and **srowo-s* (or **drowo-s*) 'river', cf. Hitt. *kappi-*, Lyd. *καυβειν* 'small'.

The Mysian Κάικος River is called *Bakir-çay* 'copper (= reddish) river' in Turkish. Thus, Κάικος is derived from **kəw-iko-s* 'red-hot', cf. Gr. *καίω* from **kəw-yō* 'to burn', *καυ-τός* 'burnt, red-hot' (see below).

The Lydian Κολή Lake (Strabo XIII, 626) is called *Mermere-göl* 'marble lake' in Turkish. Thus Κολή instead of **Κολλη* from **kol-nu-yā* is related to Goth. *hallus* m. 'rock' from **kolnu-*, Olcel. *hallr* n. 'stone, rock'.

The Pisidian Κάραλις Lake (Strabo XII, 568) is called *Kaya-göl* 'rocky lake' in Turkish. Thus Κάραλις is derived from *(*s*)*korā*, *(*s*)*kārā* or **kar(r)ā* 'rock' and the suffix *-al(l)i-*.

The tributary of the Kocabaş (Granicus) River in Troas Κάρησ(σ)ος has the Turkish name *Taş-oluk-dere*, a compound word consisting of *taş* 'stone', *oluk* 'canal' and *dere* 'rivulet'. Thus Κάρη-σ(σ)ος is derived from the same stem as Κάραλις.

Lysis, a river in Phrygia-Cabalia and Pisidia, is called *Boz-çay* in Turkish: this is a compound word consisting of *boz* 'grey' and *çay* 'river'. The town of *Αυσανία*, *Αυσανή* (Hellenized forms) is located near this river. These words are of proto-Armenian origin, cf. Arm. *loys*, gen. *lusoy* 'light', Skt. *ruśant-* 'bright, white, brilliant'.

From the 2nd millennium B. C. onwards the Greeks began to colonize Asia Minor. Similar Greek (pseudo-)translations existed in this area even in antiquity. They make it possible to give an etymology for the older names. The following are examples:

The (Lycian) name $\Sigma\acute{\iota}\beta\eta\sigma$ corresponds to the Greek name of the Lycian river $\Xi\acute{\alpha}\nu\theta\sigma$ = $\xi\alpha\nu\theta\acute{o}\varsigma$ 'yellow, golden' (now called Turkish *Ecen-çay* 'yellow river'); the ancient epithet of this river was $\delta\alpha\rho\acute{\upsilon}\rho\epsilon\sigma$ 'silvery'. Thus the Lycian name $\Sigma\acute{\iota}\beta\eta\sigma$ (with $\iota = \upsilon = \acute{\iota}$) is = Arm. *surb* 'clean', Ved. *śubh-ṛa-* 'brilliant'.

A Lycian spring is called $\text{Κάλβιος, Κάλμιος or Καλαινός}$ (St. Byz.). $\text{Καλαινός} = *kālhnos$ ($u = \eta$) 'black' is a dialectal Greek adjective, cf. $\kappa\eta\lambda\acute{\eta}\nu\eta = \mu\acute{\epsilon}\lambda\alpha\omega\alpha$ (Hesych.). Κάλβιος is, therefore, the Lycian name of the river which is derived from $*kāl-wi(y)o-s$ 'black'.

The $\text{Γῶάνιος River, Ion. Γῶήμιος or Γῶήμιος}$, in Troas, is called *Bigha-çay* in Turkish. Turk. *Bigha* is the name of the town situated near this river; it represents the Turkicized form of the Byzantine (name) Πηγαί 'springs' . Γῶάν(ι)ος, -ιος 'πηγή' is, therefore, the Thracian, Mysian or Phrygian word which corresponds to Att. $\kappa\omicron\eta\eta\eta$, Dor. $\kappa\omicron\acute{\alpha}\nu\acute{\alpha}$ 'spring': the shift $kr > gr$ appears in other Thracian words.

As has already been pointed out, the names of large rivers are of paramount importance in analyzing the ethnogenesis of a region. On the basis of the principles stated above for the interpretation of the hydronyms we shall now analyze the names of the large rivers in western Asia Minor to the west of the $\text{Σαγγάριος—Κέστρος Rivers}$.

Σαγγάριος (recorded from the time of the *Iliad* onwards), which flows into the Black Sea, is the second largest river in Asia Minor. This name is still preserved in Turk. *Sakarya*. The same stem appears in Σαγγία , the name of the place where its spring is. Σαγγάριος is derived from $*sngw-$ 'bog, marsh', cf. Arm. *ankanim* 'to fall, to diminish' from $*sngw-$, Goth. *sigquan*, E. *sink*, Anglo-Saxon *sihthe* 'marshy', Alemanic *sicht* 'humid' from $*senk-w-tt-$. The name of the Σαγγάριος River is derived from $*sngw(o)wryo-$, cf. Arm. *gayr* 'marsh, bog' from $*wryo-$, Skt. *varī* 'water', Av. *vairi-* m. 'lake'.

$\text{Ῥύνδακος (Iliad, etc.)}$, a river flowing into the Propontis, is derived from $*sruwont-akwā$ 'running water', cf. Av. *urvant-* ($< *sruvant-$) 'running', Skt. *sraṇati* 'flows'; phonetic changes $wa > u$ and $nt(h) > nd$.

$\text{Αἰσηπιος (Iliad, etc.)}$, a river in Mysia which flows into the Propontis, is derived from $*oys-āpo-s$ 'quick river', cf. Skt. *eṣā-* 'quick' from $*oyso-$ and $\bar{a}p-$ 'water', OPruss. *ape* 'river'.

Γῶάνιος , see above.

$\text{Σκάμανδρος (Iliad, etc.)}$, Κάμανδρος (Nonnus, schol. *Iliad*), a river in Troas. According to the *Iliad* (XX, 74), Σκάμανδρος was called in 'the language of the gods', Ξάνθος . On the basis of the name $\text{Ξάνθος} = \xi\alpha\nu\theta\acute{o}\varsigma$ 'yellow, bright', which is another name of the river, Σκάμανδρος may be derived from (Hitt.?) $*skā[yā]-mant(s)$ $*dra(wa)s$ 'bright river', cf. Skt. *chāyā* 'brightness, shadow, reflection', OBG *sijati* 'to shine, to be bright', and IE $*drowo-s$ 'river, stream'. Since the Hittite suffix *-mant-* appears also in the form *-want-* (which is its original form) the other name of the river is probably of the same origin but reached Homer in a different way: $*skā(yā)-want- > *Ksawanth- > *Ξα(F)ανθ- > \text{Hom. Ξάνθος}$. Thus the two names of this river and the (Pelasgian) adjective $\xi\alpha\nu\theta\acute{o}\varsigma$ are probably genetically identical. However, this interpretation is not certain.

Κάκος , see above.

$\text{Ἐρμος (Iliad, etc.)}$, the largest river in Phrygia-Mysia (Lydia and Ionia), is derived from $*sermos$ n. or m. 'stream, river', cf. Skt. *sarma-* m. 'stream', Lith. *Sérmas*, the name of a river.

Κάϊστος, see above.

Μαίανδρος, see above.

Indus (Livy, Pliny), the name of a river in Lycia and Caria, is derived from **sindhu-s* = Skt. *sindhu-h* 'stream, river'. The disappearance of the antevocalic *s-* is attested in Lycian. The name of the town of *Σινδα* (Strabo, Hierocl.), situated on this river, represents the older Milyan form of the name *Indus* with the *s-* preserved.

Ξάνθος-Σίβρος, see above.

Κέιστος (Strabo, etc.), a river in Pamphylia called *Ak-su* 'white water' in Turkish. On the basis of the Turkish name *Κέιστος* may be interpreted as deriving from **kēydtō-drowo-s*, cf. OBG *čistū* 'clean' from **kēyd-to-s* 'clear, clean', but this etymology is not sure.

Thus the ancient name of the largest rivers in western Asia Minor are of IE origin. This fact indicates that western Asia Minor has been populated by IE tribes since the most remote times.

The names of the *Σαγγάριος* and *Μαίανδρος* rivers recorded in the *Iliad* are still preserved, cf. Turk. *Sakarya*, *Menderes*. Since they have been preserved over a period of three thousand years, it may be assumed that these names come from a very remote period. Hence the conclusion may be drawn that IE tribes have lived in western Asia Minor since the most remote times.

The investigation of the names of tribes, peoples, and regions in western and southern Asia Minor, some of which have correspondences in Greece, leads us to the same conclusion.

Chapter 7

The Problem of the Relationships between the Mediterranean Languages

The problems concerning the ancient Balkan languages and the languages of Asia Minor are closely related to the problems concerning the other Mediterranean languages. There is a theory which contends that the languages of the most ancient population which inhabited the vast space between the Iberian Peninsula and the Caucasus belonged to one and the same pre-IE family, and that there was a considerable pre-IE substratum in the Greek language. Thus in order to solve the problems of the ancient IE languages of the Balkan Peninsula and Asia Minor, it is necessary to clarify the relations between the Mediterranean languages.

7.1. Introduction

During the last decades a vast amount of new data on the ancient languages of the Mediterranean and Asia Minor has been accumulated.¹ The problems arising from the investigation of these languages are closely intertwined with archaeological, ethnological, and historical questions. Abundant material and numerous investigations dealing with them have been published in a variety of journals and in specialized books, but often these works are not easily available and are unknown outside a small circle of specialists. For this reason a specialist in certain fields can scarcely get a clear idea of the achievements in the other neighboring fields.

Today compact population masses in the Mediterranean region speak different languages which belong to different families: Basque, Indo-European, Turkish, Semitic, Berber. Furthermore the Caucasian languages, which are spoken in a neighboring region, must also be mentioned. In spite of the ethnic changes which have taken place at different times, there is no sound reason to suppose that there was less language variety several thousands of years ago than there is today.

However, some scholars maintain that four to five thousand years ago the languages spoken throughout the entire huge territory between the Atlantic Ocean and the Persian Gulf belonged to the same language family

¹ This can be seen in the new edition of *Les langues du monde* ed. by Meillet and Cohen (1952) in comparison to the first edition (1924): this edition gives entirely new information on the languages discussed.

to which, e. g. contemporary Georgian belongs. Basque, Etruscan, Pelasgian (pre-Greek), Lycian, Lydian, Carian, Hittite, Sumerian, Elamite, etc. are said to belong to this family. This was Marr's conception during the first stage ("Japhetic") of his theory. This theory has supporters mainly among the scholars of the Caucasian and Basque languages but also among some scholars of the Romance and Indo-European languages.

This theory appeared in connection with the problems presented by the linguistic situation in the Aegean region and Asia Minor. During the middle of the 19th century the scholars did not have a clear concept of languages such as Pelasgian, Phrygian, Mysian, Lydian, Lycian, Carian, etc.: they only distinguished between a Semitic and an IE family, i. e., they classified a language into one of the two well-known large language families. Later, during the second half of the 19th century, it was discovered that a great number of Greek place names had correspondences in Asia Minor. Also, many Greek words did not have convincing etymologies. Furthermore, the ancient authors pointed out that the Greeks were not autochthonous in the Aegean region. On the basis of these facts and also on the basis of the aprioristic assumption that the Greeks were the first Indo-Europeans in the Aegean region, the following theory was formulated towards the end of the 19th century: the languages of the ancient pre-Greek population and of the peoples in Asia Minor, such as the Lycians, Lydians, Carians, etc., were neither of IE nor of Semitic origin but formed a group *sui generis*. Etruscan was classified into this group on the basis of the ancient tradition that the Etruscans had come from western Asia Minor and had been related to the Lydians. Thus the theory appeared of a family of Aegean-Asia-Minor or "Asianic" (a term introduced by French scholars) languages: these languages were spoken by the ancient autochthonous population of Greece and Asia Minor.² Only Phrygian was separated from this group and was defined as IE since there were several words in the Phrygian inscriptions which were quite similar to Greek.

The closest neighbors of the population in Asia Minor which were not Semitic and not of IE origin were the Caucasian peoples. For this reason, during the second half of the 19th century some scholars, for instance Pauli, Hommel, Reinach, etc., developed the hypothesis that the languages of the Aegean region and Asia Minor were related to the Caucasian languages. Some scholars classified Basque, as well as the non-IE and non-Semitic languages of western Asia, with these languages. These assertions are aprioristic: they are not substantiated by scientific data.

The acceptance of this hypothesis was especially facilitated by the following circumstances: some linguists and archaeologists, especially in Germany, tried to prove that north Germany and some of its border regions was the original home of the Indo-Europeans. They maintained *a priori* that the ancient agrarian and cattle-breeding population in the basin of the Danube was of non-IE origin. Furthermore, German racists emphasized that each language type was based on the specific biological features of the respective race. In this way they connected the different language families with specific races, maintaining that the PIE language was created by the "Nordic race" and the ancient languages in the Mediterranean region were

² See section 3. 3.

created by a specific "Mediterranean race". And since German comparative linguistics enjoyed a position of respectability for quite a long time, this hypothesis was accepted, often without criticism, by a great number of linguists, archaeologists, ethnologists, and historians in other countries.³

The relationships among the languages within a language family can be established only with the help of the comparative-historical method. There is only one methodologically correct way to prove, for instance, the relationship between Basque, Etruscan, and the Caucasian languages: it is necessary to find a sufficient number of words and morphemes which are identical in their phonological structure and which have the same or similar meaning. In two different languages some words or morphemes with approximately the same meaning may coincide purely by chance, i. e., without being related to each other, but if whole groups of words or morphemes coincide, then chance is excluded and it is proved that the languages concerned belong to the same language family, i. e., are related to each other. It is therefore of paramount importance to discover a genetic identity of whole groups of words and morphemes (for instance, the names for the parts of the body, for kinship relations, pronouns, verbal endings, etc.), as well as for these words which belong to the basic lexical fund, for instance, water, sun, day, night, to live, to die, to eat, to drink, to sleep, to stand, to sit, etc.

On the basis of obvious correspondences one can establish the phonematic laws of the relationships between languages. Relying on the phonematic correspondences established in this way, some other words and morphemes can be elucidated etymologically. In such cases the phonematic difference has to be explained through the phonematic laws which have already been established and an occasional difference in meaning should also be explained.

The relationship between languages may be quite close, as for instance among the Semitic languages, or quite distant, as between Semitic and Hamitic. In a case of a closely related language family there is a great number of words and morphemes which are obviously related, and in a case of a distantly related language family their number is reduced. But in both cases the proof for the relationship must meet the requirements described above. In a more remote relationship it is also possible to find groups of words that are obviously related⁴ (cf. Table 13).

Table 13
Related Words in Semitic and Egyptian

Semitic	Egyptian	Meaning
<i>c yn</i>	<i>c n</i>	'eye'
<i>'odn</i>	<i>ydn</i>	'ear'
<i>'nf (afncā)</i>	<i>fng</i>	'nose'
<i>lśn</i>	<i>ns</i>	'tongue'
<i>lbb</i>	<i>yb</i>	'heart'
<i>yd</i>	<i>d</i>	'hand'

³ See section 11. 1.

⁴ See Cohen 1947 on the relations within the Semito-Hamitic family of languages.

Therefore, those who maintain that there is a relationship between Basque, Etruscan, and the Caucasian languages must adduce reliable examples of this relation, i. e., examples which will meet the requirements stated above. Now let us critically analyse the attempts made in this field.

7.2. Basque

Scholars who maintain that there is a relationship between Basque and the Caucasian languages very often give the names *Iberi* and *Iberia*, which are recorded in the Iberian Peninsula and in the Caucasus as examples. The names Ἰβηρες, Ἰβηροί, Ἰβηρία, L. *Hiberi*, *Hiberes*, more rarely *Iberi*, *Iberes*, *Hiberia*, *Iberia* are recorded for the Iberian Peninsula from the 6th century B. C. (Hecat., Aesch., Hdt., etc.) and in the Caucasus from the 1st century A. D.

The similarity between these geographical and ethnic names cannot be considered to be convincing evidence of the relationship between these languages because this may be an ordinary homophony.⁵ We could give many examples of such homophony.⁶ The same kind of coincidence has occurred with the names *Albani* and *Albania* in the Caucasus (the ancient name for contemporary Soviet Azerbaidjan), in the western part of the Balkan Peninsula, and with the inhabitants of *Alba longa* in Latium. The Latin denomination *Albani* (and *Albania*), which appears considerably later as the name of a Caucasian tribe and region (Ἀλβανία, Strabo, Ptol., etc.), is a Romanized form of the autochthonous name *Halbi*, preserved as the name for the Avars by their neighbors the Caratinians: the Caucasian Avars descended from the ancient Albans. The Romans became acquainted with this name when Pompey started his march against them (Strabo XI, 491, 500). The Romans formed a derivative from *Halbi* by means of the suffix *-ānus* by adapting it to the well known name *Albani*, and for this reason the foreign ethnicon coincided only by chance with the Latin name *Albanus*.⁷

Iberia is the name of eastern Georgia but Georgian tradition is not familiar with the names *Iberia* and *Iberi*: the Georgians never called themselves *Iberi*. The term *Iberia* is found (at least in this form) only in ancient

⁵ Cf. Lacombe and Lafon 1936: 121-122.

⁶ Examples: *Audi*, a village in the Caucasus and a mountain in South America; *Athēnai* (Ἀθῆναι), a city in Greece, and *Atena*, a tribe in North America; *Elba*, a river in Germany and an island in Italy; Ἰδῆ, Dor. Ἰδα, a mountain in Troas, on the island of Crete, and *Ida*, a town in Japan; *Kāōes*, a people in Asia Minor, and *Kare*, a tribe in Central Africa; *Kuba*, a town in the Caucasus, and *Cuba*, an island in the Caribbean Sea; *Laos*, a town and a river in southern Italy and a country in Indochina; *Letti* 'Lettonians' and an Indonesian tribe; *Malta*, an island in the Mediterranean and a village in Siberia; *Nysa*, a town in Poland, in Boeotia, and in Caria; *Mvool*, an ancient Balkan tribe, and *Musa*, a tribe in New Guinea; *Nāžoi*, inhabitants of the island of *Nāžos*, and *Nasioi*, a tribe in Papuaia; *Osmā*, toponyms in Spain and Bulgaria; *Ilagía* (usually *Ilāqos*), an island in the Aegean, and *Paria*, an island in South America; *Po*, an Italian river and a Chinese town; *Vel(l)ica*, toponyms in Spain and Bulgaria; etc.

⁷ Bechert (1966) explains Caratinian *halbi* 'Avar', from which Gr. Ἀλβανοί and Arm. *Atuan-k'* are derived, through Avar *həbol* 'guest, host' and *halma* 'comrade, friend' from **halban-*. See also K. H. Schmidt 1971.

Greek and Roman texts.⁸ The Caucasianist Deeters (1956: 56) explained Gr. *Ἰβηρες* from Arm. *i Virs* 'in Georgia' acc. of *Virkē*, the Armenian name for the Georgians which originated from Arm. *i ver* 'on high'. Furthermore in the name *Iberus* (two rivers in the Iberian Peninsula) many scholars see the Basque word *ibar* 'valley' or *ibai* (with the Hamitic article *i*?), or they find a relationship with the Berber name *ber-ber-i*.⁹ As a whole this shows that the existence of the name *Iberi* in the Iberian Peninsula and in the Caucasus is only a case of homophony.

It is not convincing to base a serious theory about the relationship between peoples and languages on such homophony. Such considerations can only be used as additional proof and are of secondary importance, especially when there are other facts and when the relationship between the languages has already been proved.

Various attempts have been made to prove a relationship between Basque and the Caucasian languages but not one of them can be considered reliable. Marr, a staunch supporter of this thesis, believes that the first attempts, for instance those by Winkler, Trombetti, Uhlenbeck, etc., did not lead to positive results. According to Marr (1933: 1, 108, 164), the reason for this was the lack of sufficient knowledge about the Caucasian languages.

Marr (1920; 1926; 1933: 4, 3-16) wrote three papers in an effort to prove the relationship between Basque and the Caucasian languages. In two of his papers (1925 b; 1926) he also analyzed some Basque words and morphemes on the assumption that they were related to the Caucasian languages. Marr's suppositions were no better than the unreliable attempts of his predecessors. In some of his articles his suppositions are based on the so-called "analysis by four elements": they do not deserve any serious attention. Below are some of his best examples.

Basque *ituri* 'spring': Georg. *tk'aro* 'spring'.

Basque *bero* 'hot': Georg. *ḡbil* 'hot'.

Basque *hogeý* 'twenty': Georg. *oc-* 'twenty'.

Basque *sagar* 'apple': Georg. *sqal* 'pear'.

Basque *ibili* 'to walk': Georg. *bilik* 'path'.

These coincidental comparisons, made on the basis of a certain phonematic similarity and often notwithstanding the different meanings, cannot prove the relationship between Basque and the Caucasian languages. What is more, Marr made a methodological mistake: in order to prove the Basque-Caucasian relationship he compared Basque words with Armenian words even when the Armenian words were obviously of IE origin. For instance, the Basque word *harits* 'oak' is compared with Arm. *kañin* 'acorn' (*kañni* 'oak') despite the fact that the Armenian word is undoubtedly of IE origin: it is related to Gr. *βάλανος*, L. *glāns*, OBG *zelqđi* 'acorn'. This attempt to prove the relationship between Basque and the Caucasian languages is erroneous.

The last attempt at proving the relationship between Basque and the Caucasian languages was made by Bouda (1948; 1949; 1950). In his articles "Basque-Caucasian", "Basque and Caucasian languages", and in the book

⁸ Cf. Kakabadze 1955: 68.

⁹ Cf. Kretschmer 1953: 203.

"Basque-Caucasian Etymologies" Bouda tried to collect and systematize all the attempts at proving the relationship between these languages and tried at the same time to establish their phonematic correspondences.

A critical survey of his works will give us an impression of the status of this problem today.¹⁰

Among the 266 comparisons which Bouda mentions as the most convincing, only a few can be considered to be possible:

Basque (*h*)*ola*: Lakian *'ula* 'beam'.

Basque *eder* 'pretty': Svanetian *ezer* 'pretty'.

Basque (*h*)*azi* 'to feed': Abkhasian *adz(a)*, *az(a)* 'to feed'.

Basque *zara* 'small basket': Georg. *dzar-i* 'small basket'.

To these words about ten more can be added which are less probable. All the other comparisons are not convincing because:

(a) in spite of the fact that the meaning coincide, the phonematic closeness is not sufficient since it is often based on only one phoneme, as for instance:

Basque *jo* 'to knock': Circassian *o* 'to knock'.

Basque *jaio* 'to be born': Abkhasian *i* 'to be born'.

Basque *ikoe* 'furrow': Georg. *k'vali* 'furrow, trace'.

(b) in other words the phonematic structure is close but the meanings are different, as for instance:

Basque *humo* 'soft, ripe': Lakian *xjumu* 'liquid'.

Basque *habe* 'beam': Lakian *xjabi* 'tree (plant)'.

Some of the comparisons are obviously erroneous since the Basque words which are compared are borrowings from IE languages, as for instance:

Basque *altz*, *altza*, *alza* 'fir-tree' from Span. (from Goth.) *aliso* 'fir-tree' from IE **al(i)so-s*, cf. L. *alnus* 'fir-tree' from **als-no-s*.

Basque *uztu* 'harvest' from Rom. *augustus*.

Basque *zanko* 'leg' from Spanish.¹¹

The Caucasianist and Armenist Vogt (1954)¹² stressed this basic deficiency in Bouda's works. Thus, for instance, the following Georgian (Caucasian) words are borrowings from Armenian or from another IE language:

Georg. *pačala* 'to counsel' < Arm. *peycalu* 'to counsel'.

Lazian *kapula* 'back' < Gr. *καπόλα* 'back'.

Georg. *soro* 'cave' < Arm. *sor* 'cave' from IE **kowro-s*; the Basque word *zorro* 'bag, paunch, stomach' is in turn a derivative of Span. *zurrón* 'shepherd's bag' < Ar. *surrah* 'purse, bag'.

Georg. *puč-i* 'empty' < Arm. *peuč* < Pers. *pūč*.

Georg. *kurd-i* 'thief', Mingrelian *kwirt-i* 'thief' < *kurt-i* 'Kurd', the name of a people.

Georg. *parč-i* 'small vessel for wine' < Arm. *parč* 'vessel for water.'

Georg. *inaga* 'wild dove' instead of *inada* < Gr. *olivás*, acc. *oliváda* 'wild dove' (color of wine), etc.

Even scholars who maintain the hypothesis that there is relationship between Basque and Caucasian languages admit that the Basque names for

¹⁰ There is nothing new in Lafon's publications (1950-51; 1951-52; 1952a).

¹¹ See Hubschmid 1948-49: 313.

¹² Cf. also Klimov 1963; 1964: 29.

the parts of the body, for family relations, and for the numerals are quite different from the respective words in the Caucasian languages.¹³ Furthermore, it must be emphasized that Bouda and the other adherents to this standpoint compare Basque words with words which are arbitrarily chosen from different Caucasian languages, while in actual fact the relationship between the three Caucasian language groups—southern, northwestern, and north-eastern—has not yet been clarified.

In order to prove this relationship, some scholars make use of the comparison of single morphemes, for instance, the Basque genitive ending *-en* is compared with the genitive ending *-en* in some northern Caucasian languages.¹⁴ But the comparisons based on one or two phonemes are of no importance since the number of the phonemes is limited. Among the Caucasian languages, which have very different morphological structures, it is easy to find some similar morphemes with a similar meaning. Thus, for instance, Basque has the postpositive article *-a* as in Bulgarian (cf. Basque *gizon* 'man' and *gizon-a* 'the man', Bulg. *čovek* 'man' and *čovek-a* 'the man') but this coincidence is no more than homophony since the Slavic origin of the Bulgarian postpositive article is beyond doubt.

Therefore such attempts do not meet the scientific requirements for establishing relationships, no matter how remote, between languages.¹⁵ Nobody has yet found a sufficient number of correspondences to form the basis for establishing convincing phonetic laws. There is no way of proving relations between whole semantic groups. Thus the relationship between Basque and Caucasian has not been proved.¹⁶

Bouda's attempt, which, when compared to the others, is still the best analysis, has not even been able to convince such a staunch adherent to this hypothesis as Hubschmid. Hubschmid (1948-49: 311) writes: "In the investigation of the correspondences by Bouda we frequently come across possibilities for etymology but not genuine correspondences". The eminent scholar of Basque Lacombe (1937: 18) is very sceptical about attempts of this kind.

Below are the two important categories of words which show that Basque is not related to the language with which it has been compared. The Basque numerals and personal pronouns will be given further on.

(A) Names of family relations

aita 'father', *ama* 'mother', *anae*, *anai*, *anaie*, *anaia* 'brother' (Biscayan *anae*, *anai* 'brother of the brother'), *neba* 'brother of the sister', *arriba* 'sister of the brother', *aizpa*, *ahizpa* (Biscayan *aizta*) 'sister of the sister', *seme* 'son', *alaba*, *alhaba* 'daughter', *senar*, *senhar* 'man, husband', *emazte* 'woman, spouse', *illaba*, *lloba* 'nephew' (m. and f.; or 'son, daughter of the son'), *erren*, *errein*, *erran* 'daughter-in-law, sister-in-law', *sui(u)*, *suhi* 'brother-in-law, son-in-law'.

(B) Names of parts of the body

begi 'eye', *bebarri*, *beharri*, *begarri*, *belarri* 'ear', *sudur* 'nose', (*h)ortz* 'tooth', *biotz*, *bihotz* 'heart' (*gogo*, often compared to Georg. *guli* 'heart', means actually 'thought, spirit, soul'), *esku* 'hand', *beso* 'hand', *oin* 'foot', *zanka*, *zenkho* 'leg', *min*, *miin*, *mihi*, *mil* 'tongue', *belauin*, *belhauin* 'knee'.

¹³ See, for instance, Lafon 1947: 44.

¹⁴ See, for instance, Lafon 1947: 43-44.

¹⁵ Cf. Deeters 1952: 206-207.

¹⁶ Cf. Bokarev 1954: 47.

In the attempt to prove the relationship between Basque and the Caucasian languages it is usually pointed out that Basque was similar to the language of the ancient Iberians, who are considered *a priori* to be the autochthonous population of the Iberian Peninsula. The facts indicate the opposite. The ancient inscriptions in Iberian, i. e., the language of the people inhabiting the Spanish shores from Catalonia to Almeria and also the basin of the Ebro River, cannot be explained by means of Basque. There is furthermore no clear similarity between the endings of the Iberian words and the Basque declension and conjugation. Hence many scholars conclude that Basque did not originate from the ancient Iberian language and that on the whole these languages do not have a relationship.¹⁷ Many are of the opinion that the old Iberian language is of Hamitic (Libyo-Berber) origin¹⁸, and Hamitic had undoubtedly influenced the Basque language.¹⁹ The Hamits (Berbers, Libyans, Egyptians) are among the most ancient inhabitants of the north African shores. At a very early period Hamitic tribes penetrated into the Iberian Peninsula,²⁰ Sicily, and probably some other regions.

Since Hamitic (Berber, Libyan, and Egyptian) is remotely related to Semitic, and since Semitic had influenced the Caucasian languages, while Phoenician-Punic had in turn influenced the language of the western part of the north African shores, of ancient Spain, and of a part of Sicily and Sardinia,²¹ some elements which these languages have in common can be of Hamito-Semitic origin. Finally, the presence of a non-Hamitic African population on the Iberian Peninsula is very probable.

Today it is thought that three linguistic regions should be distinguished on the Iberian Peninsula: (a) Vasconian — the Vasconians were ancestors of the contemporary Basques — and Aquitanian, a language from the territory of contemporary southern France which disappeared around 1-100 A. D. and was closely related to Vasconian; (b) Iberian; (c) Tartessian in the region of ancient Tartessos.²² The Iberian Peninsula was also partly colonized by Phoenicians and to a lesser degree by Greeks. These languages had also influenced the ancient Iberian languages.

Recently Mukarowsky (1963-64; 1965; 1966; 1968; 1969) made an attempt in a number of articles to prove that Basque was related to Berber which belongs to the Hamitic group of the Hamitic-Semitic language family. Many of his comparisons, especially in morphology, are plausible.

¹⁷ See Baroja 1951a: 261; 1951b: 176; Lafon 1952b: 165-166; Bosch-Gimpera 1949: 107; 1951: 507; Tovar 1958: 705.

¹⁸ According to Bosch-Gimpera (1924; 1926), the Iberians are of north African origin while the Basques are autochthonous population of the western Pyrenees; see also 1956-57: 330. On the problem of the Iberians see Schnoll 1959: 1-10.

¹⁹ See, for instance, Uhlenbeck 1948: 60-61.

²⁰ According to Bosch-Gimpera 1949: 108, the Hamits inhabited the southeastern part of the Iberian Peninsula during the 3rd millennium B. C.

²¹ Cf. M. Wagner 1954: 27-28.

²² Lafon 1952b: 169. Schulten's (1940) supposition that the so-called Tartessian (Turdestan, Lusitanic) inscriptions were written in Tyrrheno-Etruscan is incorrect.

7.3. Etruscan

The language and origin of the Etruscans are two cardinal problems in elucidating the linguistic relations in the entire northern Mediterranean region; the correct solution of these problems can throw new light on a number of major linguistic and historical problems in this large area, which is most important for the history of the European peoples and their culture.

7.3.1. The Problem of Language

During the last 200 years many scholars and still more dilettants have tried to "decipher" the Etruscan language. Almost every year there are new publications but not one has succeeded in solving the "Etruscan puzzle". These attempts have proved fruitless because they were not based on scientific grounds.

Our knowledge of Etruscan comes from about 10,000 inscriptions, most of which are very short, and a small book written on linen cloth (*liber lin-teus*). The earliest inscriptions are dated from the beginning of the 7th century B. C. and the latest from approximately the 1st century A. D. They can be divided into two periods: Old Etruscan, 7th-5th centuries B. C., and Late Etruscan, 3rd-1st centuries B. C. There are also several tens of Etruscan glosses which are mentioned by the ancient authors.

Scholars began to be interested in Etruscan during the 17th century and even earlier. However, the real scholarly investigations of the problems of the Etruscan epigraphics and language started at the end of the 18th century. The Italian scholars Lanzi, Fabretti, Lattes, Ribezzo, Trombetti, Buonamici, Devoto, Pallottino, as well as many others, deserve great praise for their work in this field. Etruscan is a very important national discipline for the Italians. Valuable contributions to this study have been made by a number of scholars from other countries, namely Corssen, Deecke, Pauli, Herbig, Fiesel, Sloty from Germany; Bugge and Torp from Scandinavia; Ernout and Heurgon from France; Vetter from Austria; etc.

On the basis of the investigations a great quantity of material was collected and systematized. The meanings of some words were established, e. g.: *ais* 'god' (a gloss), *apa* 'daddy, father', *avil* 'year', *aska* '(kind of) vase', *ati* 'mother', *capys* 'hawk' (a gloss), *ci* 'three', *clan* 'son', *mut(a)na* 'coffin', *nefts* 'grandson', *prumts* 'great-grandson', *qutun* '(kind of) vase', *tin* 'day; Jupiter', *thui* 'here', *tur-ce* '(he) offered a gift', etc. The meaning of some grammatical elements was also established: *-s* gen. ending, *-ti* loc. ending, *-ce* ending for the 3rd pers. sing. pret., *mi* 'I, me', *(e)ca* 'this' and *(e)cn* acc., *ta* 'this' and *tn* acc., *-c* 'and', *-(u)m* 'but', etc.

Two principle methods, the **etymological** and the **combinatory**, were used to establish the meaning of these words.

The **etymological method** consists of explaining the Etruscan words by comparing them with words of other languages. So far, attempts have been made to decipher the Etruscan inscriptions by means of various languages: Hebrew, Greek, Italian, Albanian, Slavic, Finnish, Hungarian, African languages, American languages, Japanese... These attempts show naïve di-

lettantism and have no scientific value. The basic error in all of them is the desire to define the meaning of the Etruscan words on the basis of outward homophony. This cannot be called a scholarly application of the comparative-historical method.

There is a widespread opinion that the Etruscan language was related to Basque and the Caucasian languages. But we have already seen that the supposed relationship between Basque and Caucasian has not been proved and is not plausible. Similarly, nobody has been able to adduce sound evidence in support of a relationship between Etruscan and Basque. On the contrary, the deeper the investigation into the two languages goes, the clearer the basic differences between them become. This is the opinion of the competent scholars of Etruscan, not only of those who adhere to the idea of the IE character of Etruscan but also of those who do not consider it to be an IE language, as for instance Battisti (1935 : 377), Olzscha (1936 : 97), Pallottino (1947 : 74).²³

The combinatory method, which was developed by Deecke, consists of defining the meaning of the Etruscan morphemes and words by means of combinatory considerations based exclusively on the analysis of the material from the Etruscan texts, without taking etymological comparisons with other languages into consideration (Pauli, Herbig, Torp, Cortsen). The application of this method has yielded positive results: the meaning of some words and morphemes has been established. This method is, however, limited and its possibilities have already almost been exhausted. Until recently a great deal was expected of this method: it was thought that with its help the "Etruscan puzzle" was going to be solved. But Pallottino, himself an adherent of the combinatory method for years, did a thorough critical study of this method in a recent article (1969) and concluded that it could not provide a solution for the Etruscan problem. On the whole, both of these two methods have contributed to the elucidation of some of the problems in the Etruscan language but they have not and could not result in the solution to the "Etruscan puzzle".

About thirty years ago the opinion that Etruscan was non-IE was widespread, despite the fact that there are obviously IE elements in the Etruscan inscriptions. This opinion was above all based on the theory of the non-IE character of the ancient inhabitants of the Aegean region and of Asia Minor, a theory which was dominant for a long time. According to this theory, the IE elements in Etruscan were considered to be borrowings from neighboring IE languages in Italy. But the majority of these elements appear in Etruscan in a very odd form which cannot be satisfactorily explained as borrowings, since they usually cannot be found in neighboring languages, as for instance *tin* 'day; Jupiter'. For this reason some eminent Etruscologists maintained that Etruscan was related to the Italic languages (Lattes), to Armenian (Bugge) or that it was remotely related to IE and Caucasian languages (Trombetti).

The discovery of Hittite, as well as of the other ancient IE languages in Asia Minor, and the establishment of the IE character of Lydian and Lycian, as well as of the pre-Greek language, were turning points for the conceptions about

²³ See also Georgiev 1941 : 38.

the Etruscan language. The new data made some Etruscologists abandon their former views.²⁴ Thus, for instance, Kretschmer, who originally considered Etruscan to be non-IE, defined it as "Indo-Germanoid"²⁵ in 1925 and he made another step forward in 1940 by accepting that the basis of Etruscan was IE.²⁶ The Etruscologist Vetter also changed his previous conceptions and tried in 1937 to prove that Etruscan was an IE language. Brandenstein (1938b:301-302; 1954: 6, 22), Devoto (1944: 187-188; 1962: 166-168), Pallottino (1947: 60-61, 82), and others changed their opinions on this problem and accepted the view that Etruscan was a mixture of a non-IE and an IE language.

The Italian Etruscologists Lattes, Trombetti, Buonamici, Ribezzo, Devoto, Pallottino — to mention only the most eminent — have great merits about the investigation of the Etruscan language. The pan-Mediterranean prejudice, however, prevented the latter three scholars from solving the problem of the origin of Etruscan.

There are two basic problems in the study of Etruscan: the decipherment of the language and the origin of the people. They are interrelated because the solution for one of them can give the answer to the other. Unfortunately in Italy, the center of Etruscan studies, scholars are presently in a state of impasse about these two major problems because the most active scholars of Etruscan adhere to the aprioristic view of the autochthonism of the Etruscans and the non-IE character of the language. For instance, for the last 40 years Pallottino, one of the most eminent Italian etruscologists, has maintained this view consistently in many books and articles, despite the historical, archaeological, and linguistic data which clearly show that the Etruscans originated from western Asia Minor and were closely related to the Lydians.

Forty years ago it was possible to maintain that Etruscan was a non-IE language because it was related to Lydian, for at that time Lydian was considered to be a non-IE language. Now it is Lydian that becomes a *tertium comparationis* to prove the Hittite-Luwian origin of Etruscan. Today there is no doubt that Lydian belongs to the Hittite-Luwian group and is closely related to Hittite, as was proved by the Italian Hittitologist O. Caruba. Therefore, Etruscan also belongs to the Hittite-Luwian group and is closely related to Hittite. These are facts of contemporary IE linguistics which cannot be ignored. The old pan-Mediterraneism has been completely surpassed.

In deciphering²⁷ the Etruscan language I applied a new method — the method of the **morphological model or morphological statistics**. It is known that words can easily be borrowed from one language into another but that grammatical elements, such as case and verbal endings, pronouns, etc., are difficult to borrow. **Morphology is the most typical and stable part of the structure of a language.** In this sense every language has its spe-

²⁴ See Georgiev 1943: 5-9.

²⁵ See Kretschmer 1925: 317.

²⁶ See Kretschmer 1939: 231-2; especially 267.

²⁷ The term *deciphering* is usually used for reading a ciphered text or an unknown writing. This term can also be used for establishing the morphological structure of an unknown language, since the principles of deciphering are the same: statistics and combinations.

cific peculiarities and only very closely related languages can have **the same morphological model**. Thus the most reliable evidence for language relationships is the grammatical correspondence, the data of **the genetic identity of morphology**. For this reason the founder of comparative linguistics Franz Bopp, who scientifically proved the relationship between the IE languages, used morphology as evidence.

Therefore, in order to decipher, i. e., to understand Etruscan, one should try to establish its relationship with other languages, to find out what other language it is related to. This can be done on the basis of investigations of its morphological structure. The morphology of a language is usually concentrated at the end of the words. In order to establish the morphological model of Etruscan, it is pertinent to statistically analyze **the end, i. e., the endings of the Etruscan words**. This requires that primarily **old Etruscan texts** be taken into consideration. As we saw above, the Etruscan language is attested throughout a period of seven to eight centuries. In the course of time every language undergoes changes. These changes can affect all the parameters of the language structure: they can be phonematic (changes or disappearance of some phonemes), lexical, syntactical, etc. It is not difficult to observe that in the late Etruscan texts, as compared to the early ones, changes have taken place. For this reason **the data of the old Etruscan texts are far more important** for defining the original character of Etruscan. Moreover, at the present time conditions are especially favorable for such an investigation because **numerous old Etruscan inscriptions have been found and published** in recent years.

[7.3.2. The Morphological Model of Etruscan

Taking into consideration the most reliable data which so far have been established on the basis of the etymological and the combinatory method, and investigating the endings of the words in primarily the old Etruscan inscriptions, we can define the following morphological model of the Etruscan language.

(1) A group of nouns end in *-a*, as for instance: *apa* 'daddy, father', *aska* '(kind of) vase', *cela* 'cella', *lautniða* 'liberta', *mut(a)na* 'coffin', *papa* 'grandfather', *ðahvna* (*ðafna*, *ðapna*, *tafina*) '(kind of) vase'; the male personal names *Afuna*, *Murina*, *Papa*, *Peðna*, *Tetina*; the female personal names *Ram(a)ða*, *Ramuða*, *Sedra*, *Θana*, *Vela*.

These nouns have *-as* (*-aś*) as a genitive ending, for instance: *Afunas*, *Murinas*, *Papas*, *Peðnas*, *Tetinas*; *Ram(a)ðas*, *Ramuðas*, *Sedras*, *Θanas*.

The same nouns end in *-ati* (*-aði*) in the locative: *celati*, *mutniadi*, *paxanati* (from *paxana*).

(2) Another group of nouns end in *-i*, as for instance: *ati* 'mamma, mother', *laut(u)ni* 'familiaris, libertus', *suti* (*śuði*, *suði*) 'tomb'; the male personal names *Luci*, *Tarxi*, *Θefri*; the female personal names *Arnti* (*Arndi*), *Auli*, *Cai*, *Iarði*, *Leði*, *Uni* 'Iuno', *Veti*, *Vipi*.

These nouns end in *-is*, *-ias* or (rarely) *-aias* in the genitive, as for instance: *atis*, *lautunis*, *sutis*; *Tarxis*; *Arntiaś*, *Aulias*, *Caiaś*, *Larðias* and *Larðaias*, *Leðias*, *Unias*, *Vetias*, *Vipias*.

The same nouns have an *-ia* or *-aia* form which may be defined as the dative, as for instance: *Arnθia*, *Aulia*, *Caia*, *Larθia* and *Larθaia*, *Leθia*, *Vetia*, *Vipia*.

In the locative these nouns end in *-iti*, as for instance *śuθiti*.

(3) A third group of names end in *-ai*, which in late Etruscan shifted into *-ei*, as for instance: *Atei*, *Ceicnai* (*Ceicnei*), *Marcei*, *Mutei*, *Nerina*, *Titei*, *Tutnai* (*Tutnei*), *Velxai*.

These names end in *-ias* or *-aias* in the genitive, as for instance: *Ataias*, *Marcias*, *Mutias*, *Titias*, *Velxias* and *Velxaias* (*Velcaias*).

These names have a form in *-ia* which may be defined as the dative, as for instance: *Atia*, *Marcia*, *Mutia*, *Titia*, *Velxia*.

(4) A fourth group of nouns end in *-u*, as for instance: *atiu* 'little mother' (diminutive from *ati* 'mamma, mother'), *calu* 'the nether world; god of the nether world', *krankru* 'cat', *leu* 'lion', *mulu* 'votum'; the male names *Aulu*, *Cicu*, *Culśu*, *Haltu*, *Hulu*, *Petru*, *Precu*, *Pumpu*, *Secu*, *Trepu*; the female names *Ravndu*, *Θanicu*.

These nouns end in *-us* in the genitive, as for instance; *calus*; *Cicus*, *Haltus*, *Halus*, *Petrus*, *Precuś*, *Pumpus*; *Ravndus*.

The same nouns have a form in *-va* (*-ua*) which may be defined as the dative, as for instance: *Haltva*, *Pumpva*.

(5) A fifth group of nouns ends in a consonant, as for instance: *ais* 'god', *ovil* 'year', *clan* 'son', *laut(u)n* 'familia, gens', *qutun* '(kind) of vase', *śex* (*śec*, *sex*, *sec*) 'daughter', *θesan* 'aurora', *tin* 'day; Jupiter'; the male personal names *Arand*, *Arunθ*, *Laris*, *Larθ*, *Vel*, *Velθur*, *Venel*; the patronymics *Velednal*, *Vestrecnal*; the female personal names *Θanaxvil*, *Turan* 'Venus'; *Unial* 'Iunonalis, -le'.

In old Etruscan these nouns end in *-as* in the genitive (which in late Etruscan was syncopated into *-s*), as for instance: *Tinas* (> *Tins*); *Larθas*; *Velednalas*.

The same nouns have a form in *-a* or *-ia*, which may be defined as the dative, as for instance: *Larisa*, *Larθa* and *Larθia*, *Tina* and *Tinia*, *Velθura*, *Venala*; *Vestricinala*.

There is also a form in *-e* which may be defined as the instrumental, as for instance, *Arvndē*.

In the locative the same nouns end in *-ti* = *-θ(i)*, as for instance: *Tarxnal-θ(i)* 'Tarquiniis', *Unialti* = *Unialθ(i)*, *Velclθi* 'Volciis'.

These well attested nominal forms are sufficient to characterize the main features of the Etruscan morphological model. The declensions and case endings which can be established are shown in Table 14.

The Morphological Model of Etruscan

Table 14

Cases	Etruscan declensions (stems)				
Nom.	<i>-a</i>	<i>-i</i>	<i>-ai</i>	<i>-u</i>	cons.
Gen.	<i>-as</i>	<i>-is</i> , <i>-ias</i> , <i>-aias</i>	<i>-ias</i> , <i>-aias</i>	<i>-us</i>	<i>-as</i>
Dat.		<i>-ia</i> , <i>-aia</i>	<i>-ia</i>	<i>-va</i> (<i>-ua</i>)	<i>-a</i>
Instr.					<i>-e</i>
Loc.	<i>-ati</i>	<i>-iti</i>			<i>-ti</i>

The Morphological Model of Hittite

Cases	Hittite declensions (stems)				
Nom.	-as, -an	-is, -i	-ais, -ai	-us, -u	cons.
Gen.	-as	-iyas, -ayas	-iyas, -ayas	-uwas > -us	-as
Dat.-Loc.	-a (-i)	-iya, -aya	-iya, -aya	-uwa (-i)	-a (-i)
Instr.	-et	(-it)	(-it)	-et	-et
Loc.	-ati	-iti			

Tab 16

The Etruscan Pronominal Forms which Have Exact Correspondences in Hittite

Etruscan	Hittite
<i>mi</i> 'ego, me'	<i>ammuk, -mu, -mi</i>
<i>ca</i> 'hic, haec'	<i>kaas</i>
<i>ci</i> 'hoc'	<i>kii</i>
<i>cn</i> 'hunc, hanc'	<i>kuun</i>
<i>c(e)l</i> 'huius'	<i>ke(e)l</i>
<i>c(e)ś</i> 'hōc, hāc' (abl.)	<i>keez</i>
<i>cl vl</i> 'in hōc, in hāc' (loc.)	<i>keeti</i>
<i>an</i> 'ille'	<i>anni-s</i>

^a With an *l* after *cel* as Hitt. *apell-az* abl. instead of *apeez* with an *l* after *apeel*.

The Etruscan morphological model corresponds exactly to the Hittite morphological model shown in Table 15.

The same applies to the pronominal forms. The Etruscan pronominal forms which have been established as having exact correspondences in Hittite are given in Table 16.

The minor differences are due to phonematic shifts which have taken place in the course of the history of the Etruscan language.

The genetic identity of the morphological models of Etruscan and Hittite shows that these languages are extremely closely related: **they are two dialects (western and eastern) of the same language.**

This conclusion, drawn on the basis of the genetic identity of the morphological models, is confirmed by the following fact: the ancient historians inform us that the Etruscans immigrated to Italy coming from Asia Minor, and that Etruscans and Lydians were of the same origin.

It was established a long time ago that there are glaring examples of common linguistic features in Etruscan and Lydian. At the same time Lydian belongs to the Hittite-Luwian group of the IE language family and not long ago it was discovered that Lydian was very closely related to Hittite. Therefore Etruscan must also be closely related to Hittite. Thus the chain of scientific proofs gets its feedback and the thesis becomes finally proved.

We have scanty data on Lydian but Hittite is well known. Thus through the morphological model and on the basis of historical and linguistic data we come to the conclusion that the key to understanding Etruscan lies hidden in Hittite.

However, there is a difficulty here. Hittite had existed up to the 12th century B. C. and after that it disappeared, while the most ancient Etruscan inscriptions are from the beginning of the 7th century B. C., i. e., there is a gap of five centuries between the latest stage of Hittite and the earliest stage of Etruscan. Since languages change with the flow of time, the Etruscan of the 7th century B. C. cannot be absolutely identical with the Hittite from the 13th century B. C.

But the changes which take place in languages are not accidental, they are not chaotic: they follow strict laws. Taking this fact into consideration in order to fill the time gap, I established, on the basis of the comparative-historical method, a model of **phonematic correspondences**. It shows how Etruscan is the later development of (western) Hittite. In this way I have applied a complex method which may be called the **combinatory-etymological method** and which consists in the following: the meaning of a number of Etruscan words and morphemes is established through combinatory **considerations**, disregarding their etymology. Then, on the basis of the words and morphemes whose meanings and etymologies are well established, the main features of the Etruscan comparative-historical phonology are determined. Finally, having used this method to establish that Etruscan is a later stage in the development of (western) Hittite, one can then cautiously use the vocabulary and the grammar of Hittite to translate an Etruscan text. The Etruscan documents can thus be understood and translated with the help of the grammar and vocabulary of Hittite.

Table 17 is a comparative table of Hittite-Etruscan phonematic correspondences.

Table 17
*Comparative Table of Hittite-Etruscan
Phonematic Correspondences*

Hittite	Etruscan
<i>a, e, i, u</i>	<i>a, e, i, u</i>
<i>l, m, n, r</i>	<i>l, m, n, r</i>
<i>y</i>	<i>i (0)</i>
<i>iya > i(e)</i>	<i>i(i)a > i(e)</i>
<i>w</i>	<i>v</i>
<i>(u)wa > (ue) u</i>	<i>(u)va > (ue) u</i>
<i>h (h₂)</i>	<i>x/c (x/0)</i>
<i>k (g)</i>	<i>c(k)/x</i>
<i>p (b)</i>	<i>p/f (φ)</i>
<i>t (d)</i>	<i>t/θ</i>
<i>s</i>	<i>s (ś, z)</i>
<i>ss</i>	<i>ś(s)</i>
<i>z</i>	<i>z (ś, s)</i>
<i>ks</i>	<i>z</i>
<i>kt, pt, st</i>	<i>θ/t</i>
<i>ld</i>	<i>l (as in Latin)</i>
<i>sk, sh</i>	<i>ś(s)/z</i>
<i>sm, sn, sr</i>	<i>m, n, r</i>
<i>tr</i>	<i>x/c</i>

7.3.3. Defining the Meaning of the Morphemes

As was pointed out above, one can abstract the grammatical morphemes of Etruscan by investigating the endings of the words. But this is not enough: one has then to define the functions of these morphemes. A few specific examples are given below to illustrate the application of the morphological method. This is in fact a **complex method** in which the morphological data are complemented by combinatory means and etymological considerations.

In the old Etruscan texts the name of the supreme god of the Etruscans (= Greek Zeus and Latin Iupiter) appears in four forms:

Tin (TLE 269)²⁸

Tinas (TLE 156, 873)

Tina (TLE 506, 878) and *Tinia* (TLE 277) = *Tinīa* (SE XXXVI, 254).²⁹

These different forms of the same name are undoubtedly **case forms**.

The form *Tin* is found two more times in a later text (TLE 719) which represented an **enumeration (list)** of gods: therefore this is the form for the nominative since in a list the names would be in the basic case form, i.e., in the nominative.

The form *Tinas* is found in the syntagm *Tinas-cliniaras* (TLE 156) 'sons of Tin', which is a calque (a literal translation) of Gr. Διός-κνηροι 'sons (children) of Zeus'. Since Διός is the genitive of Ζεύς, *Tinas* must also be the genitive of *Tin*. Thus *-as* is the old Etruscan ending for the genitive and is identical with the Hittite ending for the genitive *-as*.

In late Etruscan inscriptions one finds the form *Tins* (TLE 359, 719) = *Tinś* (TLE 657, M.). In late Etruscan texts we often observe the disappearance (syncope and apocope) of vowels. Thus the late Etruscan form *Tins* is a syncopated form derived from the old Etruscan *Tinas*. This is the same syncope of the short unstressed vowel as in Oscan, cf. *humuns* = L. *homines*, *hūr̥z* = L. *hortus*, or in Umbrian, cf. *emps* = L. *emptus*.

The form *Tina* and more frequently *Tinia* are met in old Etruscan as well as in later texts. *Tina* and *Tinia* are almost exclusively found in **votive inscriptions** where something is dedicated to *Tin*. Thus *Tina* and *Tinia* are the **dative** of *Tin*. Therefore *-a* is the Etruscan ending for the dative and is identical with the Hittite ending for the dative *-a*; *-ia* = Hitt. *-iya* is the same ending of the *i*-stems transferred to the consonant stems. In Hittite there is very often a fluctuation between consonant stems, *i*-stems, and *a*-stems. The same fluctuation between consonant and *i*-stems often appears in Latin, cf. gen. pl. *parent-i-um* = *parentum*.

Thus we have the Etruscan declension:

nom. *Tin*

gen. *Tin-as*

dat. *Tin-a* or *Tin-i-a*

which corresponds exactly to the Hittite declension.

²⁸ TLE = Pallottino, *Testimonia linguae Etruscae* (1968b). The most important Etruscan inscriptions are collected in this edition.

²⁹ SE = *Studi Etruschi*, a journal on Etruscology which is published in Florence.

7.3.4. Translation or Interpretation

Until recently the Etruscan texts could only be interpreted, that is, only approximate suppositions and guesses about their content could be made. They could not be translated. In order to translate a text it is above all necessary to know the morphology of the language, since the morphemes show the relations and connections of the words in a sentence and furthermore they give additional information as to person, time, voice, etc. It had also not been possible to give the exact meaning of the majority of the few words that had become known since on the basis of the combinatory method one can usually determine only the approximate meaning of the words.

Thus the essential difference between the attempts made until now at understanding the content of the Etruscan texts and the new method consists in the following: until now only **approximate interpretations** had been presented, while with the new method it is possible to make **exact translations** of the Etruscan texts.

In the course of many centuries the intertwining of Etruscan, Latin, Faliscan, and Oscan-Umbrian in Italy resulted in an **Etrusco-Italic** linguistic union which is similar to the Balkan linguistic union. In a linguistic union there is a levelling of the phonematic systems, many forms acquire similar functions, syntactic structures come closer to each other, many words develop similar meanings, etc. Thus, such a contact and convergent development makes it possible to penetrate into Etruscan through Latin. For this reason the most precise translations of the Etruscan texts could be made **into Latin**.

To illustrate what has been explained above we shall give examples of translations of some of the old Etruscan inscriptions.

TLE 277 (a vase from the 7th or the 6th century B. C.): *tinia arunðe arta*

In this inscription we find the name of the supreme deity of the Etruscans and the personal name (forename) = L. *Aruns*, *-ntis*. Thus this is a **votive inscription**: *Tinia* must be the dative of *Tin*. Since the nominative of the personal name is *Ar(u)nð*, then *Arunð-e* must be a case similar to the Latin *ablativus auctoris*. In Hittite the Instrumental, when used in a sentence with a verb in the passive in order to designate the meaning of the Latin *ablativus auctoris*, ends in *-et*; thus Etruscan *Arunðe* is the *instrumentalis auctoris*: the ending *-e* originates from Hitt. *-et*; the final consonant had disappeared.

The third word is most probably a verb with the approximate meaning of 'to dedicate, to give, to offer'. Thus Etr. *arta* is = Hitt. *arta* 'ponitur (positus est)' 3rd pers. sing. pres. pass. of the verb *ar-* 'ponere'. The Latin translation of this Etruscan inscription is the following:

Iovi ab Arunte ponitur. 'This is given (offered) to Iupiter by Arunt'.

In Hittite this inscription would be as follows: **Tin(i)a *Aruntet arta*.

The word *tin(a)-* is attested in Hieroglyphic Luwian in which it means 'god'.

TLE 868 (an amphora from the 7th or 6th century B. C.): *mi aranð ramuðasi veštiricinala muluwanice*

Almost everything in this text was already known:

mi 'I, me'.

Aranð, a male personal name (forename).

Ramuða, a female personal name (forename).

Veštiricinal-a, a patronymic or metronymic.

muluwanice 'vovit (he dedicated)': the meaning has been known for a long time thanks to the combinatory method.

The only unclear part of the inscription was the function of the ending *-(a)ši* in *Ramuḏaši* and the ending *-a* in *Vestiricinal-a*. But, taking the close relationship between Etruscan and Hittite into consideration, these endings become clear. *Ramuḏaši* means 'Ramuthiae suae' ('to his Ramutha'), a dative with an enclitic possessive pronoun. *Vestiricinal-a* is the dative of the patronymic or metronymic (cf. *Vestreñal* from *Vestreñna*) formed with the possessive suffix *-al* = Hitt. *-alla-s*. The Latin translation of this inscription is as follows:

Mc Arans Ramuthae suae Vestiriciniae (= Vestiricini-filiae) [d]icavit. 'Aranth dedicated me to his Ramutha, daughter of Vestiricina.'

The Hittite translation is as follows: Animuk *Aranz *Ramutassi *Westirikinalla *mal-duwannait.

SE XXX, 1962, 138 (a quadrangular pillar from the 6th century B. C.): *mi larḏa tedunas*

Everything is clear in this inscription:

Larḏ-a, a case form of *Larḏ*, a male personal name (forename).

Tedunas, the genitive of the family name *Tetuna*.

The only thing that was not clear was the ending *-a* of *Larḏa*. As was seen above, this is an ending for the dative. The Latin translation of this text is as follows:

Ego (sum) Larti (dat.) Tethuni (gen.). 'I am of (to) Lart Tethuna.'

Dativus possessivus is typical of Latin and Hittite. Here we have a nominal sentence (i. e., without the verb 'to be'), which is typical of Hittite. Cf. the Venetic inscription: *Ego Neirkai Iuvantšai*.

The following archaic inscription CIE 4979 (an inscription on the front of a tomb) is similar in content:³⁰ *mi larisa plaisinas*.

Larisa, dat. of the male personal name (forename) *Laris*.

Plaisinas, gen. of a family name.

The Latin translation is as follows:

Ego (sum) Larisi (dat.) Plaesini (gen.). 'I am of (to) Laris Plaesina.'

TLE 24 (a cup from the 7th or 6th century B. C.): *ni araz iia laranīia*

Examining this inscription from the point of view of the close relationship between Etruscan and Hittite, everything becomes clear.

ni = Hitt. *eni*, a demonstrative pronoun.

Araz, a male personal name (*n* disappeared before *z*) = Hitt. *aranz* 'elevated' a participle from *ar-* 'to elevate'.

iia (the final consonant disappeared) = Hitt. *iyat* 'fecit'.

Laranīia, dat. of the female personal name **Laranai* > late Etr. *Larnei* (with syncope and *-ai* > *-ei*), an *ai*-stem which is typical of Hittite.

The Latin translation is as follows: Hoc Arans fecit Laranīae. 'Arant made this to (for) Laranīa.'

The Hittite translation is as follows:

Eni Aranz iyat *Laraniya.

TLE 941 (a vase from the 7th or 6th century B. C.): *mini spurīaza [anka]rnas mul-vanice alšai anasi*

mini 'me': this pronoun was defined long ago by the combinatory method.

Spurīaza, a hypocoristic male personal name formed by the diminutive suffix *-aza* = Hitt. *-anza-* from the name *Spurie* = L. *Spurius*.

³⁰ CIE = *Corpus inscriptionum Etruscarum*.

[*Anka*]r^{nas}, gen. of a family name.

mulvanice 'dedicated', see above.

Alšai, a female personal name in dat.: an *ai*-stem, see above.

ana-si = Hitt. *annassi* 'matri suae' ('to his mother'), cf. *Ramuša-ši*.

The Latin translation is as follows:

Me Spurius [Anca]rⁿⁱ vovit Alsiae matri suae. 'Spurius Ancarna dedicated me to Alsia, his mother'.

SE XXXVII, 1969, 283 ff. (a vase from 640-610 B. C.): *mi malak vand*

malak 'voveo (I dedicate)': Until recently only the form *mlac* (*mlax*) was known but I had suggested that it originated from an older **malák(i)* (with *ld* > *l*, syncope, and apocope) = Hitt. *maldahhi* 'voveo'. This newly found ancient inscription confirmed my hypothesis: it is one of the many proofs for the correctness of the decipherment.

Vand, the name of an Etruscan deity.

The Latin translation is as follows:

Ego voveo, (o) Vanth. 'I dedicate (this), oh Vanth.'

SE XXXV, 1967, 569 (a vase from 650-625 B. C.): *vetu s ia*

Vetu, a male personal name (forename).

s = Hitt. *si*- 'he, she, it', Lyd. *es*- 'this'.

ia = Hitt. *iyat* 'fecit'.

The Latin translation is as follows:

Vetus hoc fecit. 'Vetus made this.'

TLE 338 (a golden fibula from the 7th or 6th century B. C.): *mi mamarces: art esi*

Mamarces, gen. of the male personal name *Mamarce*.

Art, a male personal name = Hitt. *Arta*.

esi, 3rd pers. sing. pret. of Hitt. *essa*- 'to do, to make, to work out'.

The Latin translation is as follows:

Ego (sum) Mamer^{ci}; Artus elaboravit. 'I belong to Mamarce; Artus made (me).'

§ M^{él}anges d'^{archéologie} 82 (1970): 637 (an amphora from 675-650 B. C.): *mi ðihvari(e)*
ese^{ci} sie

ðihvarie, a male personal name = L. *Tiberius*: *hv* = *f*.

ese = *esi*, see above.

ci = Hitt. *kīi* 'this'.

sie dat. of Hitt. *siu-s* 'god'.

§ The Latin translation is as follows:

Me Tiberius elaboravit; hoc deo (est). 'Tiberius made me; this is for the god'.

§ SE XXXVII, 1969, 501 (a cup from the 7th century B. C.): *mi vel elðus kacriq(u)*
numesi esi putes krai tiles ðis putes

Vel, a male personal name (forename).

Elðus, gen. of a family name, cf. Gr. *Ἐλαρος*, a personal name.

kacriqun = Hitt. *hahrihhun* 'I scribbled, I wrote' 1st pers. sing. pret. of *hahriya*.

Numesi, a male personal name = L. *Numerius*.

esi, see above.

pute-s: *pute* '(kind) of vase' and an enclitic demonstrative pronoun as in Lydian.

Krai, dat. of a male personal name = L. *Grainius*.

Tiles, gen. of a family name, cf. L. *Tillius*.

ðis (with apocope) = Hitt. *tizzi* 'offertur'.

The Latin translation is as follows :

Ego Vel Elthūs scripsi. Numerius elaboravit poculum hoc. Graio Tilli(i) offertur poculum hoc. 'I, Vel Elthus, wrote (this). Numesius worked out (made) this cup. This cup is offered to Graius Tilli.'

Below I shall give the translation of a longer text, namely the text on the three golden tablets from Pyrgi (TLE 874 and 875), which are from the 5th century B. C. These tablets were fastened to the gate of a temple of the goddess Iuno-Astarte. They are especially significant since one of them is written in **Punic (Phoenician)** and this text corresponds to a great extent to the Etruscan text on tablet TLE 874. Thus we have a **semi-bilingual** text here and therefore we can to a certain extent **control** the translation of the corresponding Etruscan text through the content of the Punic (Phoenician) text. Unfortunately, the Punic (Phoenician) text is shorter, but nevertheless this semi-bilingual text is of great importance for confirming the correctness of our translation.

TLE 874: *ita. tmia. icac. heramasva [.] vatiexe unialastres. ðemiasa. mex. ðuta. ðefariei. velianas. sal. cluoenias turuce. munistas. ðuvas tameres ca. i lacve. tulerase. nac. ci. avil. xurvar. tesiam eitale. i lacve. alsase nac. atranes. zilacal. sel eitale. acnaš vers. itanim. heramve. avil.eni aca. pulum xva.*

The Latin translation of the Etruscan text is as follows:

Istam aediculam hasque hermas (= statuas divinitatis) is quidem construxit, lunonali Stellae (= Astarti) tum (?), Dominae suae, multum regens (sive potens rex) Tiberius ipse Veliani, maximus clientium (scil. Dominae suae), donavit. Evanuit tum is procul (sive diu). Sacerdotes hūc ei libabant. In finibus suis (= regno eius) ita tres anni abiere quidem. Istoque (modo?) autem in malo ii libabant captivo ei. Ita Iulio mense tum(?) dies dei mortis eius mala morte solvit. In ista autem herma (= statua) anni (sunt) illi (sive illius) morti. Sors, autem, curre!

The Latin translation of the parallel Punic (Phoenician) text is as follows:

Dominae Astarti (est) locus sacer (= sacellum, aedicula) hic, quem fecit et quem dedit Tiberius Veliani, regens (sive rex) Caere, (in) mense sacrificii solis (Iunio/Iulio), donum in templo; et is construxit aediculam (?). Quia Astarte desideravit clientem suum, regni (sive regnandi) sui (in) anno tertio (anni sunt) III in mense Iunio/Iulio in die sepulturae dei (sive divinitatis). Et anni statuae divinitatis in templo suo (sunt sive sint) anni sicut stellae hae.

The text on the second Etruscan golden tablet is as follows:

TLE 875 *nac. ðefarie. veliunas. ðamuce cleva. etanal. masan. tiur unias. sel ace. vacal. tmial. avilxval. amuce pulum xva. snuiaq*

The Latin translation is as follows:

Ita Tiberius Veliuni aedificavit res aureas (?) quidem (?). Solaris dea Luna lunonis (= Astarte) eius in morte (= in memoriam mortis) epulum templare anniversarium habuit. Sors, autem, curre! Ei salutem fac quidem!

Thus the golden tablet with the shorter text was made for the anniversary of Tiberius Veliuni's death. I have analyzed this text in detail in two articles: 1966a and 1970-71. I shall give only some of the most important Etruscan-Hittite correspondences here.

i-ta = (e)ta, *i-ca* = (e)ca, see above; -c 'and'.

tmia = Hier. Luw. TŪ-mia 'part of the temple'.

vati-xe 3rd pers. sing. pret., cf. Hitt. *wedahhun* '(I) built.'

mex (with syncope) = Hitt. *mekki* 'much' or 'powerful'.

ðuta, cf. Hitt. *daddu-* 'to rule'.

sal (with syncope) = Hitt. *salli-* 'big, great'.

cluvénias = Hitt. *kuluwanniyaš* dat.-loc. pl. of *kuluwanni-* 'vasal'.
duvas = Hitt. *tuwawaz* 'from afar; a long (time)'.
tameres = Hitt. *dammareš* nom. pl. '(a kind of) priests.'
ca = Hitt. *kaa* 'here'.
nac = Lyd. *nak* 'thus'.
eitale dat.-loc. sing., *eitāla* nom.-acc. n. pl. = Hitt. *idalu-* 'bad, vicious'.
sel = Hitt. *seel* 'eius'.
acnaš = Hitt. *agganaz* abl. of *aggatar* n. 'death'.
itani-m = Hitt. *edani-ma* dat.-loc. 'in isto, in eo' + *-ma* 'but'.
eni = Hitt. *eni-* 'that'.
pul-um = Hitt. *pul* 'lot, fate' and *-ma* 'but'.
ḫamu-ce 3rd pers. sing. pref. = Hier. Luw., Lyd. *tam-* 'to build'.
masan = Hitt. *massani/ā-* 'god, goddess'.
s-nu-ia-φ (a syntagm) = Hitt. *si nuun iya-p(a)* 'ei salutem fac quidem'.

7.3.5. Conclusion

These examples are sufficient, in my opinion, to show the effectiveness of the thesis.³¹

Thus, once it is proved that Etruscan is closely related to Hittite, with the help of the grammar and vocabulary of the Hittite language almost all the Etruscan texts can be translated.

Therefore, with the help of the complex method of the morphological model, by making use of the data of the etymological and combinatory methods, and through the grammar and the vocabulary of Hittite, the Etruscan texts now can be understood and translated. This same method was used to translate the Avestan texts with the help of Sanskrit and to translate the Oscan-Umbrian inscriptions with the help of the Latin grammar and vocabulary.

The colonization of Etruria by Hittite emigrants took place in the same way as the Greek colonization. The Hittite migration took place towards the end of the 2nd millennium and the first quarter of the 1st millennium B. C. The main languages spoken in western Asia Minor at that time were Thracian, Mysian, Phrygian, and Hittite-Luwian (Maeonian = Lydian, Lycian, and Carian). As a result of the investigations over the last twenty years Thracian, Mysian, and Phrygian have become better known: Etruscan cannot be of Thracian, Mysian or Phrygian origin.

Herodotus (I, 94) gives us some information about the Lydian origin of the Etruscans. Lydian is closely related to Hittite. Thus Etruscan must also be akin to Hittite. The analysis of the Etruscan texts completely confirms Herodotus.

The Hittite origin of Etruscan is an important problem not only for Etruscan studies but also for the study of Hittite and for IE comparative-historical linguistics. In fact Etruscology is a part of Hittitology since Etruscan is simply the late alphabetical form of syllabic cuneiform Hittite.

³¹ For more details see Georgiev 1962; 1963c; 1964b; 1966a; 1967a; 1967b; 1969b; 1970-71; 1971b; 1974; 1975; 1979.

7.3.6. Borrowings

In Etruscan there are also borrowings from Thracian, (Daco-)Mysian, Indo-Iranian (as in Hittite), Phrygian, Greek, and from Italic languages. Examples are:

1. From Thracian, (Daco-)Mysian, Indo-Iranian or Phrygian:

lautn 'familia' from IE **lewdhín(o)-*.

**Paasen-* 'ἡγεμών, king' = Skt. *rājan-* 'king' from **rēg-en*; *raśn(a)* = L. *rēgnum*, Skt. *rājna-*, Thrac. **Pḥsoos*, king of the Thracians: *ē* > (Daco-)Mys., Indo-Iranian *ā*. *tur-ce* 'donavit', cf. Arm. *tur-ke* pl., Gr. *δῶρον* 'gift' from **dōro-* (Thrac., Phryg. or Gr.).

2. From Greek:

culixna, xulixna = *κυλίχνα*, a kind of vessel.

etera(i)- = *ἐταρεία* from **swet-*.

hupni 'grave' = *ὑπνιον* from **supnio-m*.

nip(e) 'aryballos' = (χέρε-)ὑβρον from **nigw-*.

pruxum = *πρόχυον* acc. from. *πρόχους*, a kind of vessel.

pute(re) = *ποτήρ* or *ποτήριον* 'cup'.

3. From Umbrian or Latin:

murs = L. *mors* 'death'.

nefts = *nepōs, -ōtis* 'grandchild'.

prumts, prumaθs = *pronepōs, -ōtis* 'great grandchild'.

The mixed character of the Trojan-Etruscan language can be explained by the very long history of the Trojan-Etruscan people. The Trojan people consisted of three or four components: Hittite — the most important, Thracian, Mysian (Dardanian), and Phrygian. The (Daco-)Mysian component is represented by *Δαροδάριοι* or *Δαροδάριοι*. Later, after Troy (VII b) was conquered and destroyed by the Phrygians or the Greeks, Trojan-Etruscan was influenced by Greek (in the Aegean region and in Italy), Umbrian, and Latin-Faliscan (in Italy).

Those who are willing to admit of a relationship between Etruscan and Basque or Sumerian should consider the numerals which are quite different.

Etruscan: 'one' — 'six': *max, θu, ci, zal, huθ, sa*; 'seven', 'eight', 'nine': *semq-, nupq-* (or *muq-*).

Basque: *bat* 'one', *bi* (*biga, bida*) 'two', *hirur* 'three', *laur* 'four', *bortz* or *bost* 'five', *sei(r)* 'six', *zazpi* 'seven', *zortzi* 'eight', *bederatzi* 'nine'.

Sumerian: *as, ges* 'one', *min* 'two', *es* 'three', *limmu* 'four', *i, ia* 'five', *as* 'six', *imin* 'seven', *ussu* 'eight', *illimu* 'nine'.

7.4. The Origin of the Etruscans

The problem of the Etruscan language is closely related to the problem of the origin of the Etruscans. This problem has been discussed and examined in detail in many books and papers.³² For this reason only the new data will be analyzed here.

There are three major theories about the origin of the Etruscans: that they came from western Asia Minor, that they were autochthonous, and that

³² See, for instance, Ducati 1938 (the most lucid description of the facts); Pallottino 1947 (a one-sided defence of the thesis of autochthonism); Georgiev 1950.

they were of Alpine origin. Each theory has several variations. Today the third theory is being rejected as improbable.

The theory that the Etruscans were the autochthonous population in Italy is based on the following passage by Dionysius Halicarnassensis: οὐ μὲν δὲ οὐδὲ Ἀνδῶν τοὺς Τυρρηγίους ἀποίκους οἶμαι γενέσθαι· οὐδὲ γὰρ ἐκείνοις ὁμόγλωσσοί εἰσιν, οὐδ' ἔστιν εἰπεῖν ὡς φωνῇ μὲν οὐκέτι χωρῶνται παραπλησίᾳ, ἀλλὰ δέ τινα διασώζουσι τῆς μητροπόλεως [γῆς] μηνύματα. οὔτε γὰρ θεοὺς Ἀνδοῖς τοὺς αὐτοὺς νομίζουσιν, οὔτε νόμοις, οὔτ' ἐπιτηδεύμασι κέχρηται παραπλησίᾳ, ἀλλὰ κατὰ γε ταῦτα πλέον Ἀνδῶν διαφέρουσιν ἢ Πελασγῶν. κινδυνεύουσι γὰρ τοῖς ἀληθέσι μᾶλλον εὐκότα λέγειν (οἱ) μηδαμόθεν ἀφιγμένον, ἀλλ' ἐπυχώριον τὸ ἔθνος ἀποφαίνοντες, ἐπειδὴ ἀρχαῖόν τε πάνν καὶ οὐδενὶ ἄλλῳ γένει οὔτε ὁμόγλωσσον, οὔτε ὁμοδίαιτον (ὄν) ἐδρίσκεται.

Dionysius lived during the second half of the 1st century B. C., i. e., at a time when the Etruscans were already almost completely Romanized: he did not have exact data about them and had even less data about their origin and language. Furthermore, he could not have known anything about the Lydians and their language since the Lydians had long since been Hellenized. His speculations, which are tinged with certain doubt (οἶμαι, κινδυνεύουσι τοῖς ἀληθέσι μᾶλλον εὐκότα λέγειν), are not convincing. His affirmation does not have many adherents.

The correct view is the thesis of the Aegean origin of the Etruscans, a thesis which is accepted by almost all the specialists: the few adversaries of this thesis cannot minimize its significance. Even Pallottino (1968a: 86), who for many years was an adherent of the view of the autochthonous character of the Etruscans, had to admit that: "Of these three theses the most popular and universally accepted is, without doubt, the first." (i. e., the thesis that the Etruscans originated from Asia Minor). The problem of the origin of the Etruscans is a question of the history of the Aegean region as well as of the languages of the Aegean region and of Asia Minor.

One of the most important tasks of comparative-historical linguistics and of ancient history with regard to the Aegean region and Asia Minor is to find out the proto-historic ethnical situation in this area. For this purpose a combinatory method is applied in which the data from Greek and Italic tradition is combined with linguistic considerations, archaeological facts, and data from Egyptian, Hittite, and Semitic texts.

The arguments in favor of the migration of the Etruscans by sea from western Asia Minor are the following.

(1) *Information from the ancient authors.* Herodotus, Timaios of Tauromenion, Strabo, Velleius Paterculus, Servius, Seneca, Solinus, Tacitus, Plutarch, Festus, etc., pointed out that the Etruscans originated from Asia Minor. On the whole, this was a well known fact in antiquity.³³

(2) *Archaeological data.* The Etruscan culture cannot be derived from the culture of the tribes and peoples that inhabited Italy during the 2nd millennium B.C. It shows close connections with the culture of the Aegean region from the end of the 2nd millennium or the beginning of the 1st millennium B.C., and especially with the culture of northwestern Asia Minor.³⁴

³³ See Buonamici 1939: 92-93.

³⁴ See for instance Bosch-Gimpera 1929: 35-36.

(3) *Linguistic data.* The Etruscan language is not directly related to any of the Italic languages. It is most closely related to Lydian and Hittite, and on the whole to the Hittite-Luwian language group.

The data which indicate that the Etruscans came from Asia Minor have been examined often. It is not necessary to discuss them again here. All reliable data indicate that the original home of the Etruscans was north-western Asia Minor. Suffice it to refer to the Schachermeyr's work (1929): after a detailed investigation of all the historical, archaeological, and linguistic facts Schachermeyr suggested that the original home of the Etruscans must be sought in the territory including Troas, Mysia, and northern Lydia, i. e., in the northwestern part of Asia Minor,³⁵ but he was not able to determine this territory more precisely. However, there are facts of which Schachermeyr was not aware, and they give the clue to the solution of the problem of the origin of the Etruscans.

From Virgil's *Aeneid* and Livy's *Histories* everybody knows the legend of the migration of the Trojans to Latium and of their founding of the Roman state. The Romans considered themselves the descendants of the Trojans. From the data given by Virgil and Livy one can draw the following conclusions: after the fall of Troy the Trojans, led by Aeneas, left Troy, travelled through Macedonia, Crete, and Sicily, and settled in Latium; after fighting against the local tribes they founded "the new Troy" there.

The Trojan legend was not a poetic invention of Virgil. The Roman poet had taken it "ready-made" from his predecessors and then embellished it with some poetic details. The same legend was recorded much earlier by Greek authors.

The earliest information about the migration of the Trojans into Italy is found in the writings of the Sicilian poet Stesichoros (7th-6th century B. C.). Stesichoros' work is not preserved but in the so-called *tabula Iliaca*, which is based on Stesichoros' poem "Iliupersis", the following words are written under a picture: "Aeneas with his people starts for Hesperia (Italy)". The same fact is found in the writings of Hellanicus of Lesbos (5th century B. C.), Timaios of Tauromenion (4th-3rd century B. C.), and Callias of Syracuse (3rd century B. C.). Hellanicus calls Rome the new Troy and describes the Romans as descendants of the Trojans. According to information from the historian Timaios, Aeneas first founded Lavinium and then Rome. The first Latin author to mention the migration of Aeneas and the Trojans to Latium was Naevius (3rd century B. C.).

Leaving details aside, the nucleus of this legend is the following: Trojan settlers arrived in central Italy by sea and founded a colony. Of the populations which inhabited central and northern Italy at that time, the Etruscans were the only people who could be related to Troy. The Etruscans were excellent sailors. Rome was under their rule and the name *Roma* was probably of Etruscan origin,³⁶ which could be adduced as proof that the city was founded by Etruscans. All this information taken together encourages us to search for connexions between the Trojans and the Etruscans.

This information is confirmed by linguistic data. In the *Iliad* and the *Odyssey* the Trojans and Troy are called *Τρῶες* (sing. *Τρῳῆς*) and *Τροίη*,

³⁵ Cf. Schachermeyr 1929: 284, 289. Cf. also Falkner 1948: 91-93, 108-109.

³⁶ See, for instance, Ducati 1938: 7-8.

Since *-oi-* was reduced to *-oi-*, the name *Tqoiñ* was derived from the older form *Tqoia* which is recorded in *Etymologicum Magnum*; *Tqoiñ* comes from *Tqoia*, literally 'the country of the *Tqōēs*': it is a derivation of *Tqōēs*, as for instance *'Aqzadia* from *'Aqzades*, *Φqvγia* from *Φqvγες*, etc. In Hittite documents Forrer discovered the name of Troy in the name of a town in northwestern Asia Minor written *ta-ru-i-sa* (*KUB* XXIII, II, 19 = 12, II, 13) which can be read as *Truysa*. But a phonetic difficulty reduced the value of this quite probable hypothesis: the presence of *s* in the Hittite name *Truysa* could not be explained if it were to be identified with *Tqoia*.

Other scholars considered this name to be equivalent to the name *twrwš'* in Egyptian texts from the 13th century B. C., which was identified with the name of the Etruscans.³⁷

The *Iliad* and the *Odyssey*, which on the whole reflect the time of the end of the Mycenaean civilization, are undoubtedly the most important sources for the history of the Aegean region at that period. They have preserved the recollections of historical events. The *Iliad* relates the rivalry between two great powers, Mycenae and Troy, for supremacy in the Aegean basin: these were two powerful rival blocks, one of them led by the Achaeans and Danaans and the other by the Trojans and Dardanians.

It is a fact that during the 3rd and the 2nd millennium Troy played the same role in the northern part of the Aegean basin as Byzantium played during the Christian period. After the fall of Cretan supremacy Mycenae took over the rule in the southern part of the Aegean region.

Egyptian documents from the 13th and 12th centuries B. C. mention the names *'q'jwš* 'Achaeans', *d'n'w* 'Danaans', *drdnj* 'Dardanians', *twrwš'*, which is usually identified with the name of the Etruscans.³⁸ The names *Ahhiyawa* 'Achaea' and *Truysa* or *Tru(y)s(i)ya* 'Troy' are mentioned in Hittite documents.

It is odd that in the Egyptian texts from the 13th and the 12th centuries B. C., i. e., at the end of the Mycenaean period, one comes across the names of the Achaeans, the Danaans, the Dardanians, and *twrwš'* (usually interpreted as 'Etruscans'), but one does not find any mention of the name of the Trojans, though their less known allies, the Dardanians, are mentioned. Moreover, the Etruscans (*Tvqonvoi*) are not mentioned even once in the *Iliad* and the *Odyssey* where so many names of different tribes and peoples are given. The absence of the name *Tvqonvoi* in the *Iliad* and the *Odyssey* is particularly odd since, according to information from the ancient authors, the Etruscans played an important role in the Aegean region at almost the same period as that which is reflected in Homer's epos.³⁹

Actually this is only a seeming contradiction since the name *twrwš'* in the Egyptian texts is the name of the Trojans, who called themselves **Trōs-es*: the names *Tqōēs* and *Tqoia* come from the older forms **Trōses* and **Trōsyā*. The Greek names *Tqōēs* and *Tqoia* are later forms of the original names; they show a phonematic development which is regular for the historical phonology of Greek.

³⁷ See Bilabel 1927: 280.

³⁸ See Wainwright 1959.

³⁹ See the passages on the Etruscans from the ancient authors as collected by Buonamici 1939.

The explanation of the Greek name *Τρῶες* as derived from the older form **Trōses*, which is beyond any doubt from the point of view of the history of the Greek language, was suggested by me and somewhat later, but independent of me, by Bonfante. It is of exceptional importance for the history of the Mediterranean peoples. The simple assumption that the Homeric names *Τρῶες* and *Τροίη* (from *Τροία*) are derived from the original forms **Trōses* and **Trōsyā* because of the disappearance of the intervocalic *s* in Greek can solve several important problems in the history of the Aegean region. The disappearance of the intervocalic *s* took place in Greek before the 15th century B. C. Consequently, the Greeks had borrowed the name of their neighbors and of their country, **Trōses* and **Trōsyā*, during the first half of the 2nd millennium B. C. Later these names were correctly changed to *Τρῶες* and *Τροία* > Hom. *Τροίη*.

Thus the historical panorama painted in the *Iliad* is completely confirmed by the Egyptian chronicles. The principle peoples in the Homeric epos — Achaeans and Danaans, Trojans and Dardanians — were known to the Egyptians as well. The name *twrwš* in the Egyptian texts, which can be read as (*Trusa* or) *Truse*, very adequately reflects the original name **Trōs-es*, since Egyptian orthography, having no signs for the vowels, has marked the foreign *ō* (long closed *o*) with a *w*.

This is confirmed by the name *ta-ru-i-sa* = *Truysa* in Hittite documents. *Truysa* instead of *Trusya* represents the original name of the region *Trōsyā*. Since Hittite orthography did not have a sign for *o*, the *o* (long closed *o* coming close to an *u*) was marked by an *u*. Since *sy* was alien to Hittite, the foreign name was adapted to the model of Hittite place names with the ending *-(i)s(s)a*, as for instance in *Karkisa*, *Adhulissa*, *Hakpissa*, *Yahrissa*, *Pisa*, etc. However, in Hittite documents the form *tar-ū-i-is-si-ya-as* (KUB XIII, 35, III, 39), i. e., *Tru(y)s(i)ya*, also appears.

Therefore, the names *Τρῶες* and *Τροία* > *Τροία* are derived from the older forms **Trōses* and **Trōsyā* and are identical with the Egyptian name *Trus(e)* and the Hittite name *Truysa*, *Tru(i)s(i)ya* = *Trusya*. This interpretation of the name of the Trojans makes it possible to solve one of the most controversial problems in the history of the ancient Mediterranean peoples, namely the problem of the origin of the Etruscans.

The name L. *Etrūria* is derived from the older form **Etrūsia*, as can be seen from the name *Etrus-ci* where the original *s* is preserved. It is known that according to the phonematic laws of Latin the intervocalic *s* shifted into *r*. Initial *e-* in *E-trus-ci* and *E-trūria* does not belong to the root of the word but is a prothetic vowel before the initial consonant cluster *tr*: this is evident from the fact that the initial *e* is lacking in L. *Tu(r)sci*, another name for the Etruscans. Furthermore, the vowel *ō* shifted into *u* in Etruscan, as is recorded in Greek names borrowed in Etruscan, for instance, Etr. *Atunis* = Gr. *Ἀδωνίς*, Etr. *Aplun* = Gr. *Ἀπόλλων*, cf. also Etr. *tur-* 'to give' = Gr. *δῶρον* 'gift'. The suffix *-ci* in the name *E-trus-ci* is of secondary origin, cf. *Etrūria* where this suffix is not present; *-ci* is an Italic suffix found in proper names like *Falis-ci* together with *Faler-ii* from **Falis-iol*, *Aurun-ci* (*s* > *r*) = Gr. *Ἀῤῥορες*, *O(p)s-ci* = Gr. *Ὀπυκτοί*, *Vols-ci*, *Herni-ci*, Umbr. *Iapusco* = L. *Iapydēs*, Umbr. *Nahar(t)co* = L. *Nahartēs*, etc.

Therefore the names L. *E-trus-ci*, *E-trūr-ia* originated from the older forms **Trōs-es*, **Trōs-yā* and are identical with the names *Τρῶες*, *Τροία* >

Tῥοῖᾱ, which are derived from the same original forms. The phonematic differences between the Greek names *Tῥῶς*, *Tῥῶες*, *Tῥοῖᾱ* > *Tῥοῖᾱ* and the Latin *E-trus-cī*, *E-trūr-ia* are the same as the differences between the Greek names *Λίγυς*, *Λίγυες* and their Latin correspondences *Ligus*, *Ligurēs*, *Ligus-cus*, *Liguria*. Thus on the basis of the **genetic identity** of the names one can say that the **Etruscans were descendants of the Trojans**, i. e., that they were Trojan settlers in Italy. This is certainly a glorious and worthy origin for this remarkable people.

In the light of this conclusion the well-known legend of the migration of Aeneas and the Trojans to western Italy finds its historical explanation. There is a historical fact of major importance in this legend, namely the recollection by the Etruscans of their migration from Troy to Italy. Some scholars had detected a grain of historical truth in this legend as, for instance, the historian Weber (1925: 41-42), the archaeologists Karo (1925: 213-214) and Bosch-Gimpera (1929: 39), and the etruscologist Olzscha (1936: 98). Their assumption is now confirmed by the genetic identity of the names *Tῥῶες* = *E-trus-cī* and *Tῥοῖᾱ* = *E-trūr-ia*.

In this way two new facts have been established which are of exceptional importance for solving the problem of the origin of the Etruscans: **the genetic identity of the names and the Trojan legend.**

When I suggested this interpretation of the Trojan legend for the first time (1936), the objection was made that the legend could not be of Etruscan origin because the Etruscans did not know about it. Indeed, at that time only two late Etruscan mirrors with the image of Aeneas were available and they could be interpreted as being the result of Roman influence. In the meantime archaeological findings of exceptional importance confirmed my thesis. During the excavations which were made 40 years ago in Veii, a large number of statuettes were found which represent Aeneas fleeing with his father from Troy. The statuettes date from the end of the 6th or from the first half of the 5th century B. C.

This finding created great interest. The eminent French archaeologist Picard (1944: 154-155) wrote at the time: "C'est un document historique capital". He continued: "Ce qui est fort important, c'est que le petit groupe étrusque n'a pas été découvert... isolement... on en a déjà toute une série d'exemplaires". And he concluded: "il est sûr que les découvertes de Veii vont poser le problème, désormais, sous des perspectives fort nouvelles. L'Etrurie archaïque connaissait la légende; elle l'utilisait aux portes de Rome, en conformité avec la tradition plastique et littéraire grecque. N'aurait-on point apporté ce mythe en terre tyrrhénienne, déjà d'Asie Mineure, et avant le VI^e siècle? Les contacts établis de si près entre Veii et Rome au temps où Vulca décorait le Capitole n'expliqueraient-ils pas l'emprunt latin?"⁴⁰

Not long ago the Etruscan origin of the Trojan legend was brilliantly confirmed by an Etruscan inscription.

The French Etruscologist Heurgon (1969) recently published an Etruscan inscription which was written five times on three columns (milestones), probably from the wall of an Etruscan temple. These columns were found in northern Tunisia to the south of Carthage: they are from the 3rd-1st centuries B. C. Heurgon has correctly assumed that the name of the Dar-

⁴⁰ Cf. also Fuhrmann 1940: 403-404; 1941: 422-423; Alfoeldi 1957: 18-19.

danians can be found in this text, as well as the case form *tinš*, which he connected with the name of the supreme deity of the Etruscans, *Tin*.

The inscription, which is repeated five times without spaces between the words (*scriptio continua*), is as follows:

mvna tazv taš tvl tātāniov tinš Φ

On the basis of Hittite this Etruscan text can be translated just as the late Latin texts are translated with the help of classical Latin. This is actually a late Hittite text which would read as follows in classical Hittite:

*Munna dassu dantus tuwala *Dardanius-ma *tinus. 1000.*

Latin translation:

Vela (= tege, obtege, conde) solide sumptos (= apportatos) procul (= peregre) Dardanios autem (= δέ) deos. M (= mille, scil. passūs).

The English translation is:

'Defend (= hide, keep) well the Dardanian deities taken (= brought) from afar. 1000 (feet).'

Commentary

These are border columns (milestones) from the wall of an Etruscan temple situated 1000 feet from each other. This was probably a settlement of refugees from Etruria from the time of the Roman-Etruscan wars or during the civil wars in the 3rd-1st centuries B. C.

mvna = Hitt. *munna* 2nd pers. sing. imperative from *munn-* 'to cover, to hide'.

tazv = Hitt. *dassu* n. from *dassu-s* 'strong, healthy, solid; heavy; important'.

taš (through syncope, assimilation, and disappearance of the nasal before an s) = Hitt. *dantus* acc. pl. from *dant-* part. from *daa-* 'to take'. On the syncope cf. for instance Oscan *hūrz* = L. *hortus*, Umbrian *emps* = L. *emptus*.

tvl (through contraction *uwa* > *u* and apocope) = Hitt. *tuwala* n. from *tuwala-* 'remote'.

tātāniov-m 'Dardanios autem (= δέ)': acc. pl. from *tātāni-* and the postpositive (enclitic) conjunction Etr. *-m* = Hitt. *-ma* 'δέ, autem'.

tinš (through syncope) = Hitt. **tinus* acc. pl. from Hier. Luw. *tin(a)-* 'god'. On syncope cf. Oscan *humuns* = L. *homines*.

Φ = L. *M* 'mille passūs', cf. Heurgon 1969: 545.

According to the *Iliad*, the Trojan people consisted of two tribes (a tribal alliance): the Trojans with Hector as their leader and the Dardanians with Aeneas as leader, cf. the formula which is often met in the *Iliad*: *Τρῶες καὶ Δαρδανιοὶ* or *Τρῶες καὶ Δαρδανίῳνες*. In the inscription above the Etruscans call their deities "Dardanian gods". Consequently the Etruscans had a good recollection of their Trojan-Dardanian origin.

Thus the legend of the migration of the Trojans to western Italy is of Etruscan origin: this is the recollection by the Etruscans themselves of their migration from Troy to Etruria, the new Troy.

At one time the Etruscans ruled over a large region which included Latium and Rome. After the assimilation of the Etruscan people by the Romans — the Romanization of the Etruscans began during the 4th century B. C. — the Romans adopted the Etruscan legend. Thus Caesar and Maecenas, whose families were of Etruscan origin, were correct in insisting that they were Romans of Trojan origin. The legend of the origin of the

Etruscans, the Trojan legend, was preserved by the Romanized Etruscans and passed down to the Romans together with the symbols of royal power (*fascēs, toga praetexta, sella curulis*, etc.).⁴¹ It is well known that the Etruscans had a great influence on the Romans and on their language.

This explanation makes it possible to solve yet another problem in ancient history. All the historical, archaeological, and linguistic data indicate the Aegean origin of the Etruscans and their important role in the Aegean region. This fact, however, is in seeming controversy with the Homeric epos since the Greek name of the Etruscans, i. e., *Τυρσηνοί*, is completely lacking in the *Iliad* and the *Odyssey*. The complete absence of the name of a people which had played an important role in the Aegean basin at that time and which had a connection with the events depicted in the Homeric epos seems very odd. This unclarified fact led certain scholars, such as the historians E. Meyer (in his older works; 1892: 23, 27) and Beloch (1956: 50-51), to refute the hypothesis of the Aegean origin of the Etruscans. What was then a difficulty has now become an argument in favor of the identification of the Etruscans with the Trojans. Actually the Etruscans are very well represented in the Homeric epos but they are referred to by their original name, i. e., *Τρῶες* from **Trōses*, while *Τυρσηνοί* is a later form of the same name which did not exist when the epos was composed.

Together with the name *E-trus-cī* there is also Gr. *Τυρσηνοί*, Umbr. *turscum, tuscom*, L. *Tuscī*, which derives from the older form **Turscī* since in Latin the *r* before an *s* and a consonant disappeared. This name probably is recorded in an Etruscan inscription in the form *turz(a)* (inscription from Capua, probably from the 5th century B. C.).⁴² There is only one possible way of explaining the variety of forms of the name of the Etruscans. The names L. *Etruscī* and *Etrūria*, both with a prothetic vowel and a long *ū*, cannot be explained as derivatives of *Τυρσηνοί* or *Tu(r)scī*. If the initial cluster *tr* was alien to Etruscan the form **trus-* cannot be interpreted as being a methathesis of *turs-*: in such case the long *ū* in *Etrūria* also remains unexplained.

The Italic form *Tu(r)s-cī* cannot be explained as a borrowing from Gr. *Τυρσηνοί*. Since the suffix *-āno-*, which has the same function, is typical of the Italic languages (Latin, Umbrian), it would be hard to explain the reason for its substitution. Furthermore, the supposition that the Romans and the Umbrians, who at least since the beginning of the 1st millennium B. C. had lived in the neighborhood of the Etruscans and had for a long time been under their rule, borrowed the name for the Etruscans not from the Etruscans themselves but from the Greeks, is quite improbable.

The name *Τυρσηνοί*, Dor. *Τυρσηνοί* is found in Greek texts from the end of the 6th century B. C. at the earliest.⁴³ This is the same name but slightly modified and borrowed from a late dialect during the 6th or 7th century B. C. It is known that the islands of Lemnos and Imbros were inhabited by Tyrsenians-Etruscans for a long time. This was probably the Lemnian dialect or some other dialect from the last remnants of the Trojan-Etruscan language in the Aegean region. The people speaking this dialect were called **Tursyan-* with methathesis from **Trusyan-* < **Trūsyān-* 'Tro-

⁴¹ See Homo 1938: 23.

⁴² See Vetter 1937: 54.

⁴³ *Τυρσηνοί* in Hesiodus (*Th.* 1016) is an interpolation.

jans', i. e., inhabitants of **Trūsyā* < **Trōsyā* 'Tṛoía' or **Turs(es)* with metathesis from **Trus(es)* < **Trūses* < **Trōses* 'Tṛōēs'. The Greek name *Tṛoḡnoi* is correctly derived from the form **Trusyān-*, while in the Italic *Tu(r)s-cī* we find the form **Trus(es)*.

Obviously, after the fall of the Trojan state, *Tṛoía* — i. e., the country of the *Tṛōēs* — was reduced to a small territory consisting of southern Troas, part of western Mysia, northern Lydia and several neighboring islands such as Lemnos and Imbros. Thus the story in Herodotus, who relied on a historical fact, is explained. The name of the royal son *Tṛoḡnós*, who led the Tyrsenians-Etruscans to Italy, is simply the ethnicon 'Trojan'. The recollection of this migration was preserved in the Lydian legend because part of late Lydia was once in the territory of the Trojan state (or was at least under Trojan rule) and because at the time of Herodotus the Trojans were already assimilated: Troas and northwestern Asia Minor in general were partly Hellenized and partly occupied by Phrygians and Mysians. Furthermore, in Herodotus' time the recollection of the link between Tyrsenians and Trojans had faded.

Thus, towards the end of the 13th-12th century B. C., i. e., towards the end of the Mycenaean period, the Trojans were called **Trōses* 'Tṛōēs', their country was called **Trōsyā*, literally 'the country of the **Trōses*, Tṛoía' and the inhabitants of this country were called **Trōsyā-n-* 'inhabitants of **Trōsyā*, Trojans'. The more ancient name was preserved in Egyptian documents from the 13th century B. C. in the form *twrwš* = *Trus(e)* from **Trōs-es* 'Tṛōēs' and in Hittite documents in the form *Truysa* and *Tru(y)-s(i)ya* from **Trōsyā*.

The names **Trōses* and **Trōsyā* were known to the Greeks before the 15th century B. C. Towards the 1st half of the 2nd millennium B. C. there was a phonematic shift in Greek: intervocalic *s* disappeared and *-sy-* shifted into *-yy-*. This is why these two names appear in Greek (Homeric) in the forms *Tṛōēs* and *Tṛoía*.

Between the 11th and the 6th centuries B. C., due to the establishment of Trojan colonies, two Trojan dialects could be distinguished. The initial consonant cluster *tr* was discarded in each of these dialects in a different way. In the western dialect (Etruscan) a prothetic vowel appeared before *tr*, while in the eastern dialect (Lemnian or Tyrsenian-Tuscan) the initial cluster *tr* was transformed through metathesis. In both dialects the closed vowel *ō* shifted into *u*. Thus in Latin the name *E-trus-cī* appeared with the Italic suffix *-ko-* which was borrowed from the form *E-trūs-* < **Trōs-es* 'Tṛōēs' of the western Trojan dialect (Etruscan) and *E-trūria* from **Trōsyā* 'Tṛoía'. Furthermore, Latin and Umbrian borrowed the name *Tu(r)s-cī* with an Italic suffix *-ko-* from the form in the eastern Trojan dialect (Lemnian or Tyrsenian) *Turs-* with metathesis from **Trus-* < **Trūs-es* < **Trōses* 'Tṛōēs'.

In Greek one finds the name Dor. *Tṛoḡnoi*, Ion. *Tṛoḡnoi*, Att. *Tṛoḡnoi* which is derived from the form of the eastern dialect (Lemnian, Tyrsenian) **Tursyān-* with metathesis from **Trusyān-* < **Trūsyān-* < **Trōsyā-n-* 'inhabitants of Troy, Trojans'.

Thus the two Italic names of the same people, *E-trus-cī* and *Tu(r)s-cī*, reflect the two principal layers of Trojan settlers in Italy: the Etruscans — the first settlers, and the Tuscans — late settlers belonging to the same people.

The specific forms of the Etruscan social system were determined by their origin from Asia Minor. The existence of fortified towns indicates the presence of a state and a class society. During the Mycenaean period a slave-owners' society probably existed in Troy, almost of the same type as that in the Mycenaean or Hittite culture: during the 2nd millennium B. C. Troy was one of the most powerful city-states in the Aegean region, witness the archaeological excavations as well as the descriptions in the *Iliad* and the *Odyssey*.

On the basis of archaeological and historical data it can be assumed that during the 2nd millennium B. C. Trojans settled in some regions of northern Greece and southern Thrace and that Troy spread its supremacy over the northern part of the Aegean region. Furthermore Thucydides (VI 2, 3) says that after the fall of Troy, some Trojans (i. e., Trojan settlers) migrated to western Sicily where they founded the towns of Eryx and Egesta. Since during the 6th century B. C. western Sicily fell under the rule of Carthage, it can be assumed that the Trojan settlers gradually were assimilated but that part of the Trojan population was probably forced to emigrate (see section 10.2.8).

If Trojan settlers could settle in western Sicily it is not difficult to assume that they also settled in Etruria and the nearby island of Elba, as they would have been attracted by a land which was rich in ores: copper and iron. Sicily and the Carthaginians are also mentioned in the Trojan legend in connexion with the migration of the Trojans from Troy to Italy. It can be surmised that at the beginning a Trojan colony was founded in Sicily and from there Etruria was colonized (see section 10.2.8).

The colonization of Etruria by the Trojans-Etruscans took place approximately in the same way as the Greek colonization. It was not a question of the migration of the entire Trojan people but of isolated groups of Trojan immigrants who at the beginning settled in some parts of the coast of Etruria — Tarquinia, Caere, etc., and most probably also in Umbria. At that time Etruria was inhabited by Umbrians, and Latium as well as part of southern Etruria was inhabited by Faliscans and Latins. Gradually the Trojans-Etruscans spread their rule over the indigenous population, which became partly Etruscanized. However, the local population influenced the newcomers as well.

Thus the Trojans are no longer only a legend: they have taken their proper place in the history of the ancient world.

7.5. *The Language of the Lemnos Stele*

According to information given by the ancient authors the island of Lemnos was inhabited by Tyrsenians (Etruscans) or Pelasgians before the Greeks came.

The language of the two inscriptions on a tomb stele from the 6th or 7th century B. C., which was found on the island of Lemnos, is considered to be closely related to Etruscan. These are two dialects of the same language. This inscription is examined in detail in my article "Späthethisch = Altetruskisch" (1963c). Only the most essential points will be given here.

The span of time between the last Hittite texts (the end of the 13th century B. C.) and the Lemnian inscription is about five centuries. Like the late Latin inscriptions which are translated by means of classical Latin, this inscription—and the Etruscan (= late West Hittite) inscriptions in general — can be interpreted with the help of Hittite.

On the stele which was found in the eastern part of the island of Lemnos a warrior is portrayed with a shield, a leather helmet, and a spear. The main indications for the interpretation are a grave monument, a warrior with a spear, and the place names *morina(i)* = *Móvwa*, a town on the western coast of the island, *poke* = *Φώκη* or *Φωκαία*, a town on the western coast of Asia Minor to the southeast of Lemnos.

The inscription begins with *wanalasial*, in which the majority of scholars see the name of the deceased: probably *Wanal Asial*, cf. the Etruscan personal names *Venal-*, *Venel*, and from Asia Minor *Ovanalis*, *Bavalis*, Etr. *Asi*, *Asi(al)*. The ending of the name *-al* is the same as in the Etruscan names *Arnθ(i)-al*, *Larθ(i)-al*; similar formations exist in Lydian and in general in Hittite-Luwian.

The name *Morinail*, a derivative (ethnicon) of *Morinai-* (*ai-stem*) = Gr. *Móvwa*, a town on the western coast of the island of Lemnos, is similar in its formation.

Poke dat.-loc. sing. (*i-* or *ai-stem*) = Gr. *Φώκη* or *Φωκαία*, a town on the western coast of Asia Minor at about 170 km southeast of Lemnos.

Poki-asiale nom. (-acc.) pl., an ethnicon from *Poke*: the possessive suffixes *-asi-* and *-al-* have exact correspondences in all the Hittite-Luwian languages; *-e* = Hitt. *-es*, an ending for the nom. (and acc.) plural.

The identity of the following words of the Lemnian text with the corresponding Hittite words is obvious:

aker = Hitt. *akir* (with an *i* instead of *e*) 3rd pers. pl. pret. from *ak(k)-* 'mori, occidi, to perish'.

šivai = Hitt. *suwaait* 'trudebat, trusit' 3rd pers. sing. pret. from *suw-* 'to push, to rebuff'.

avis = Hitt. *awiti-s* 'leo (?)'.

maras = Hitt. *maar(iy)az* or *maar(ay)az* abl. instr. from *maari-s* 'spear'; *maras̄m* = Hitt. *maar(iy)az-ma* with *ma* = Etr. *-(u)m* 'autem, δέ'.

mav = Hitt. *maau* imperat. 3rd pers. sing. from *maa-* 'to grow, to succeed, to change', cf. *maa* imperat. 2nd pers. sing. 'salve'.

holaies̄, holaies̄i = Hitt. **hullaa(i)es-sis* 3rd pers. sing. pret. from *hull-* 'to fight' and *-si-* 'is, ea, id' = Lyd. *-s* (*-š*) enclitical pronoun.

siasi = Hitt. *siyati* 3rd pers. sing. pret. med. from *siya-* 'se ostendere' or *šia-si* = Hitt. **siyat-sis* (?).

arai = Hitt. *araais* 'eminuit, eminebat' 3rd pers. sing. pret. from *ar-* 'to raise, to elevate'.

The Hittite (and Latin) translation of texts A and B of the Lemnos inscription is as follows:

Text A

Aa 1 *wanalasial: šeronai: morinail*

2 *aker: tavaršio*

- Ab 1 *šivai*
 2 *evišðo : šeronaið*
 3 *sialxviš : aviš*
 4 *marāš : mav*
 Ac *holaies naqoð šiaši :*

Hittite translation

- Aa 1—2 *Wanal(as) *Asial(las) saaru(n) naais, *Murinailles
 akir, t-as *warsiu.
 Ab 1—2 Suwaait, *e-uiskit-us (?), saaru(n) naist.
 3 Sialas(?) hwis(?) awitis.
 4 *Maaraz maau.
 Ac Hulla(i)es-sis (?) n-apecti(?) siyati-sis(?)

Latin translation

- Aa 1—2 Vanal Asial (= Asius) in praedam duxit, Myrinaei mortui (= occisi) sunt,
 et is acquiescito (= contentus esto).
 Ab 1—2 Trudebat, is (?) persequabatur (?) eos, in praedam ducebat.
 3 Se ostendens(?) vixit(?) (sicut) leo.
 4 Hastā crescito (= salveto) !
 Oppugnabat is et in eō (?) se ostendebat is(?).

Text B

- B 1 *holaiesi : qokiasiale : šeronaið : evišðo : toverona*
 2 *rom : haralio : šivai : eptešio : arai : tiš : qoke*
 3 *šivai : aviš : sialxviš : marāšm : aviš : aomai[ta?]*

Hittite translation

- B 1 *Hulla(i)es-sis *Pukiassialles, saaru(n) naist, e-uiskit-us (?) tuuwa aruna.
 2 Aruma haranas-iwar suwaait. Ept ishiul (?) : araais etez *Puki.
 3 Suwaait awitis, sialas(?) hwis(?), *maaraz-ma awitis uwal[ttat].

Latin translation

- B 1 Oppugnabat is Phocaeos, in praedam ducebat, is (?) persequabatur (?) eos
 procul in mari.
 2 Admodum (?) aquilae instar trudebat. Fecit pactum (?) : eminuit eō
 Phocaeae.
 3 Trudebat (sicut) leo, se ostendens(?) vixit(?), hasta autem leo videbatur.

Commentary

šeronai, *šeronaið* = Hitt. *saaru(n) naais* and *naist* 'in praedam (acc. directionis) duxit (ducebat)': *o* = *u*; Hitt. *saaru-* c. n. 'praeda'; *naais* = *naist* 3rd pers. sing. pret. from *ney-* 'to lead, direct'.

morinail, see above: *-e* disappeared before the vowel of the following word (syncope); or see Georgiev 1974.

tavaršio = Hitt. *t-as* **warsiu*: *t-as* 'et is' and imperat. 3rd pers. sing. from *war-siya*- 'to put up with, to calm down, to be contented'.

ewisðo = ? Hitt. **e-uiskit-us*: *-i-* (or *-a*) 'is' (?); **uiskit* 3rd pers. sing. from *uisk-* iterat. from *uiya*- 'to send, to drive away'; *-us* acc. pl. from *-as* 'is, ea'.

sial xveiš, *sial xviš* = Hitt. **siyala*- nomen agentis(?) from *siya*- "sich zeigen" and *hwes-*, *hwis*- 'leben, am Leben bleiben'(?).

naqoð = ? Hitt. *n-apeeti*: *nu* 'nunc, et' and *apeeti* dat.-loc. from *apaa-s* 'is, ea', *apaat* 'id'.

toverona = Hitt. *tuwaa* 'procul' and *aruna* dat.-loc. from *aruna-s* 'sea'.

(*a*?)rom = Hitt. *arun(m)a* 'excessively, much'.

haralio = Hitt. *haranas iwar*: gen. sing. from *hara(n)-* 'eagle' and *iwar* 'instar, (sic)ut' a postposition with gen.; Lemnos *io* (i. e., *iu*) = Hitt. *iwar* with (*u*)*wa* > *u* and disappearance of final *r* as in Hittite. Instead of *haralio* one probably has to read *haranio* (or with dissimilation). Such comparisons with an eagle or with a lion are found in Hittite texts, see Meriggi 1962a; Otten 1964: 119-120.

eptesio (syntagm) = Hitt. *ept(a)* 3rd pers. sing. pret. from *eep(p)-*, *ap(p)-* 'to take, to grasp' and ? *ishiul* n. 'commitment, order, treaty'.

tiš = Hitt. *etez* 'eō' abl. from *eta-* 'iste, is' or *ta-* 'is, ea'.

aomai[ta ?] = Hitt. *uwaittat* 3rd pers. sing. pret. med. from *au(s)-* 'to see; to read; med. to show oneself, to appear'; the shift *au/u* and *w/m* appears in the conjugation of the Hittite verb: pres. sing. active 1st pers. *uwhi*, 2nd pers. *autti*, 3rd pers. *auszi*, pl. 1st pers. *aumneni* or *umeni*, 3rd pers. *uwanzi*, etc.

7.6. Hattic, Hurrian, and Urartean

Hittite was not the real name of the people who wrote the majority of the cuneiform texts from Bogasköy: it is actually the name of the pre-Hittite people of non-IE origin (substratum) whom we call the **Hattians**. But after the assimilation of the Hattians this name was used for Hittites and thus we can use the name Hittite for the IE people and language. The situation is the same with the name Bulgarian(s), which now refers to a Slavic people (and language) but which once meant a Turkic people (and a Turkic language), the latter being assimilated by the Slavic population. Today the name **Hittite** is accepted by the majority of specialists for the people and the language of the cuneiform texts from Bogasköy. The Hittite themselves called their language **Nesian**: *naasili*, *nisili* or *nesumnili*, the latter being a derivative of *nesumna-*, an ethnonym of the name of the town of *Nesa*, one of their ancient settlements in Asia Minor.⁴⁴

The old non-IE language of the Near East have recently been examined in detail by Djakonov in his book "The Languages of the Ancient Near East" (1967) and in the collective work *Altkleinasiatische Sprachen* (1969): Friedrich (Hurrian and Urartean), Reiner (Elamite), and Kammenhuber (Hattic).

Hattic has elements in common with the Abkhasian-Circassian and the Cartwelian languages.⁴⁵ The typical feature of Hattic — the use of prefixes to express flexion⁴⁶ — is found in these languages and the Hattic word

⁴⁴ On the name *Nesian* see Sommer 1947: 12-13; Kammenhuber 1969b: 120-121.

⁴⁵ Cf. D'jakonov 1954: 47; 1957: 88; Dunaevskaja 1960: 73-76; Deeters 1963: 76.

⁴⁶ Cr. *taš-te-ta-nūw-a* 'let him not come'; *taš* 'not', *te* opt., *ta* prefix, *nūw* root. See Dunaevskaja 1959: 20-21; 1961. On Hattic see also Kammenhuber 1959b; 1969b.

wa-shap/w 'gods' (Laroche) from *shaf* 'god' is related to the Adigeian (Circassian) word *washo* 'god' which, according to Deeters, is a compound word with the meaning 'grey (blue) sky'.⁴⁷ Below are some examples of Hattic vocabulary:

Names of familial relations

mamma- 'mother'; *ziwatu* (*zawatu*) 'wife'; *inu* (*binu*?) 'son, child', *le-binu* pl., *le-u-binu* 'your children', *le-i-binu* 'his children'; *zintu* 'grandchild'.

Nouns

antu- 'man, person'; *eštan* 'day', *Eštān* 'sun, god of the sun'; *kap* 'sky'; *katte* 'king', *kattah* 'queen'; *pi(r)* 'stone'; *puri-* 'master'; *ura* 'spring'; *wel* 'house', *le-wel*, *le-wael*, pl., *be-wil* 'at home'; *wur* 'man, person'; *zar* 'ram'; *zariun* 'man, person'; *zihar* 'tree'; *ziya-p(a)* 'on (in) the mountain'.

Verbs

binna '(you) walk'; *iya-* 'to give'; *niwaš* 'to sit'; *nuwa* 'to walk'; *put* 'to be'; *wah-kun* 'he put it'; *wau* 'to eat'.

Adjectives

šah 'bad'; *huu-* 'big'.

Pronouns

ušhāš 'we ourselves'; *ud-* 'you(?)'; *udhuru* 'you(?)'; *an(n)-* 'this'; *ima* 'this'.

Numerals

apa 'five'.

Conjunctions, prepositions, particles

pala (*bala*, *wala*) 'and'; *be-* 'in'; *uk* 'like'.

Hurrian (Mitannian) was spoken in the region which was called *Su-bartu* by the Assyrians and was situated to the north of Akkad. There are no data about the Hurrians being part of the autochthonous population of Asia Minor. There is no Hurrian toponymy (and in general no onomastics), at least not before the 2nd millennium B.C., to the west of the most eastern parts of Asia Minor.⁴⁸ Most probably the Hurrians penetrated into the eastern part of Asia Minor toward the end of the 3rd millennium B. C.⁴⁹

⁴⁷ This word most probably is of Semitic origin, cf. Ar. *šāhib(un)* 'master, ruler', pl. *šāhib(un)*. But see also Deeters 1963: 76. According to Melikišvili (1965), Hattic was superimposed on a Hittite-Luwian substratum (?).

⁴⁸ Cf. D'jakonov 1954: 44; Gelb 1944; 1956: 378-379.

⁴⁹ Cf. Bittel 1950a: 61; D'jakonov 1954: 57; Gurney 1962: 7.

A typical feature of Hurrian is the presence of numerous suffixes and combinations of them in the words. According to Kammenhuber (1968b:59), Hurrian is an agglutinative language.

Urartean (Chaldic, Vanian), the pre-IE language of Armenia, is related to Hurrian. Urartean was used in a region which was called Urartu by the Assyrians and whose capital, *Turušpa* or *Tušpa*, was situated in the region of Van. Urartean was spoken in the Lake Van area from the 9th to the 6th century B. C. Almost the entire archaic layer of non-IE vocabulary in Armenian is of Urartean origin. The Armenian phonematic system has Urartean features. On the whole Armenian and in part Georgian show a considerable Hurrian-Urartean influence.⁵⁰

It is possible that there is a relationship between Hurrian-Urartean and the Dagestan languages in northeastern Caucasus.

Below are some examples from the Hurrian vocabulary and their Urartean correspondences.

Names of familial relations

attaj 'father'; *anuna* 'mother'; *šena* 'brother'; *ela* 'sister'; *putki* (*wutki*) 'son'; *hubiti* 'youngster, son'; *šala-* 'daughter', Urartean *sə'la* 'daughter'; *siduri-* 'girl, daughter'; *ašti* 'woman, wife'; *anunati* 'grandfather, old man'.

Nouns

alla(n)i 'mistress, lady'; *arinni-* 'spring'; *arte* 'town'; *asar* 'door'; *awari* 'field'; *eki* 'spring'; *eni* 'god'; *ese* 'sky'; *ewri-* (*ebri-*, *ibri*, *iwri*) 'master, king', Urartean *ewri-* 'lord'; *hab(u)r-* 'land'; *hari* 'street'; *hinzuri* 'apple'; *hurri* 'night'; *makanni-* 'gift'; *pala* 'canal', Urartean *p ili-*; *paba-* 'mountain', Urartean *baba-*; *šahri* 'garden'; *šavala* 'year'; *šeya-* 'water, river'; *šeri-* 'day'; *sumu-* 'hand'; *tiša-* 'heart'; *tiwi-* 'word, something'; *unini-* 'country'; *wari-* 'reed arrow'.

Verbs

ag- 'to lead, to direct', Urartean *agu-*; *ar-* 'to give', Urartean *aru-*; *edini-* 'he gave', *edialam* 'he did not give'; *haš-* 'to listen'; *hau-* 'to take'; *gul-* 'to say, to speak'; *tinišu* 'he makes'; *man(n)-* 'to be, to exist', Urartean *manu-*; *pal-* 'to recognize'; *tan-* 'to make'; *tat-* 'to love'; *un-* 'to arrive'; *waš-* 'to bear'.

Adjectives

hai- 'small'; *itk-* 'clean'; *kirai-* 'long'; *nirae-* 'weak'; *šehala-* 'clean'; *teae* 'big', Urartean *teae*; *telamae* 'big'; *tupp-* 'strong, spacious, powerful'; *wahri* 'good'; *zugi-* 'small'.

Pronouns

šu-, *iša-*, *ište-* 'I', *-tta-* 'to me, (from) me', Urartean *ješa*; *we-* 'you'; *-tilla* 'we'; *-lla* 'from them, to them'; *emeni-* 'whoever'; *adi-*, *anti-* 'this'; *uli-* 'another'; *awe-* 'someone'.

⁵⁰ Cf. D'jakonov 1954: 94; 1958: 27-28; Meščaninov 1958; Kammenhuber 1975: 116

Numerals

*šin(i)*⁵¹ 'two'; *kig* 'three' (?); *tumni-* 'four'; *šinda*, *šitta* 'seven'; *niši-* 'nine' (?); *eman-* 'ten'.

Conjunctions

-ān 'and'.

Hurrian and Urartean do not show any similarity to Hattic. The supposed relationships with the family of Cartwelian (Georgian) languages has not yet been proved.⁵² Nevertheless we can consider Urartean and Hurrian to be related to some of the contemporary Caucasian languages. There is nothing in these languages which indicates a relationship either with Basque or with Etruscan.

7.7. Sumerian, Elamite, and Kassite (Cosseian)

Sumerian, the language of the most ancient form of writing, was the language of a people who lived to the south of Babylon near the Persian gulf. Sumerian is well known from numerous and varied texts; some Sumerian dialects are also known. In spite of these favorable conditions, no one has yet succeeded in adducing sound facts in favor of a relationship between Sumerian and any other language.⁵³

The **Elamites** inhabited a mountainous region between Mesopotamia and the Iranian plateau (now Zagros, Luristan, and Khuzistan). We know about **Elamite** (or **Susian**) through several written documents from three different periods: (1) the second half of the 3rd and the first half of the 2nd millennium B.C., (2) from the 16th to the 7th century B. C., and (3) from the 6th to the 4th century B. C.⁵⁴ There are no reliable data which could prove a relationship between Elamite and the Caucasian languages. Elamite is not related to Hurrian.⁵⁵ Vorobev-Desjatovskij (1956) suggested that Elamite was probably related to the Dravidian languages.⁵⁶

Kassite (or **Cosseian**) was spoken in a region which neighbored on Elam (in Zagros) and extended up to the vicinity of Diarbekir.⁵⁷ Data about this language are very scarce: the scanty Kassite linguistic remains do not suffice to make a plausible study of this isolated language possible. Some scholars suppose that there is a relationship between Kassite and Elamite. Probably the languages of the Lulubeians and the Caspians, who inhabited the mountains of western Iran during the 3rd-1st millennium B. C., belong to the same group.⁵⁸

⁵¹ From Akkad. *šina* 'two'?

⁵² Cf. D'jakonov 1954: 86-87. Džaukjan (1963) supposes that there is a IE substratum in Urartean.

⁵³ Cf. Meillet and Cohen 1952: 85; 89; D'jakonov 1954: 47-48; 1967: 83-84.

⁵⁴ On Elamite see D'jakonov 1954: 57-58; Rainer 1969. Cf. Elamite *igi* 'brother', *sak* 'son', *pak* 'daughter', etc.

⁵⁵ Cf. J. Friedrich 1969: 22.

⁵⁶ See also D'jakonov 1967: 107-109; McAlpin 1975.

⁵⁷ Cf. Balkan 1954.

⁵⁸ Cf. D'jakonov 1967: 60.

Sumerian, Elamite, and Hurrian show no relationship with one another, cf. Kammenhuber 1975: 116.

A comparison of the 1st and 2nd person of the personal pronouns in Basque, Sumerian, and Elamite shows that any supposition of a relationship between these languages is improbable.

Basque: *ni* 'I', (*h*)*i* 'thou', *gu* 'we', *zu* or *zuek* 'you'.

Sumerian: *ma*, *mae* 'I', *za*, *zae* 'thou', *mende(n)* 'we', *menze(n)* 'you'

Elamite: *ū* 'I', *nu* 'thou', *niku* or *elu* 'we', *nun* 'you'.

We have already compared the Basque numerals with the Sumerian numerals. These comparisons show not only that the relationship between these languages is far from being proved, but that it actually does not exist.

7.8. Conclusion⁵⁹

In the northern part of the Mediterranean one must distinguish between at least three different language regions which date back to the most ancient times.

(1) The Pyrenean languages which fall into: (a) **Vasconian**, i. e., Basque, and Aquitanian which has disappeared; Vasconian is probably related to Berber; (b) **Iberian**, the language of the ancient inscriptions from the eastern part of the Iberian Peninsula; the relationship between Hispano-Iberian and Vasconian has not been proved but it is probable; it is also probable that Iberian was a Hamitic (Libyan-Berber) language; (c) **Tartessian**, whose position is not yet established.⁵⁹

The most ancient population of northwestern Italy, Sardinia, and probably of other Italic and Sicilian regions spoke languages which were related to the languages of the ancient population of the Iberian Peninsula. Libyan-Berber tribes had inhabited the southern part of the Iberian Peninsula since the most ancient times and their language had a considerable influence on (Iberian and) Vasconian. We can assume that Libyan-Berber tribes penetrated into Sicily and southern Italy at a very early period.

(2) The southern IE languages: pre-Greek (Pelagian); Termilian=Eteocretan (Minoan); Hittite, including (Trojan-)Etruscan (and Elymian) and Lydian; Luwian, including Hieroglyphic Luwian and Lycian=Termilian; Pisidian; Carian; and Palaic. These are the languages of the ancient inhabitants of the southern part of the Balkan Peninsula (the Aegean region) and (western) Asia Minor.

(3) The Caucasian languages: (a) Hattic, (b) Hurrian and Urartean. Hattic was the language of the ancient autochthonous population of northeastern Asia Minor.

There had probably been some mutual influence between Pyrenean and Southern IE; the mutual influence between Southern IE and Caucasian must have been even stronger. But we have no reliable data which show that there was a time during which the Balkan Peninsula was inhabited by tribes speaking languages related to the Caucasian or the Pyrenean languages.⁶⁰ No one has yet been able to indicate reliable data showing a relationship

⁵⁹ See H. Schuchardt 1906; Uhlenbeck 1940: 203; Untermann 1962: 301–302.

⁶⁰ Hubschmid's (1964) thesis is untenable (see section 11.4.1).

between the ancient toponymy of the Balkan Peninsula and the toponymy of the Caucasus or of the Hispano-Iberian Peninsula. The cases of homophony, as for instance **Eβρος* and *Ebro* (Gr. **Ιβηρ*), do not prove anything.

In the past many toponyms from the Aegean region whose IE origin is unquestionable were considered to be pre-IE. Unfortunately, even now there are linguists who still consider them to be pre-IE without having any sound reason for doing so. For instance:⁶¹

Καλυδών, a Greek place name derived from *καλός* 'nice, good' and *-υδών* 'water', cf. Skt. *udán* loc. 'water'.

Κάλυδνα, later *Κάλυμνα*, a Greek place name from *καλός* and *-υδνα* 'water', cf. *ἄλυσ-ύδνη* 'wave (literally water) of the sea'.

Μυκήνη, a derivative from *μύκη(ς)* 'mushroom' like **Ανθήγη* from *ἄνθη* 'flower', *Πελλήνη* from *πέλλα* 'stone, rock'.

Θεναί, a town on the island of Crete, is = *σιεναί*, f. pl. of *σιερός* 'narrow' with a phonetic shift *σι-* > *θ-*, which is typical of the Cretan dialect; etc.

One of the improbable assertions produced by the pan-Mediterranean theory is found in an article by Menghin (1948: 111-130) which was published in the Argentinian journal *Runa*. Menghin speaks of a prehistoric migration of the Elamites from the Near East to Greece and Sicily. As proof he mentions the presence of the following toponyms: **Ελυμία* in Arcadia and near Haliacmon, **Ελύμιον*, an island near Euboea (or a settlement on the island of Euboea), **Ελυμιώται*, **Ελυμιώται*, the inhabitants of **Ελυμρία* (**Ελυμία*), a region in Macedonia near Epirus, *Σόλυμοι*, a Lycian tribe, **Ελυμοι*, a Sicilian tribe. The comparison is based exclusively on phonetic similarity. It is not clear why the name *Σόλυμοι* is included here: the antevocalic initial *s* regularly disappeared in Greek, but it must be pointed out that the name Elam had never had an initial *s* (cf. Assy. *Elamtu*)⁶² and therefore *Σόλυμοι* cannot be derived from the name of the Elamites. Conversely, the Greek origin of the Greek toponyms **Ελυμία*, etc., is obvious: these are derivatives of *ἐλμος* 'millet'. **Ελυμία* means 'place where millet grows'. This is one of the most usual ways of forming toponyms, cf. *Κεγχρεά*, *Κεγχρεά*, *Κεγχρε(ι)αί*, a settlement in the Peloponnesus, from *κέγχρος* 'millet', **Οροβίαι*, a town in Euboea, from *ὄροβος* 'peas', *Πρασιαί*, an Attic demos, from *πράσσον* 'leak', *Βατία*, a town in the Epirus, from *βάτος* 'blueberry', etc.

A number of words were declared to be related and given as examples of a supposed Pyrenean-Caucasian relationship, but this was done without any scientific basis and only on the basis of homophony: these words do not have anything in common. A typical example of this is the following comparison: L. *camox* 'wild goat', Basque *gama* 'wild goat', Cauc. *gamus* 'bull'.⁶³ The Caucasian word is borrowed from Persian *gāvmeš* 'bull, ox' < Iran. **gaomaeša*.⁶⁴ and the Latin word is also of IE origin.⁶⁵

The latest attempt to prove the existence of a relationship between Pyrenean and Caucasian was made by Hubschmid (1953: 103-104: 1960a;

⁶¹ See Georgiev 1941: 163-164; 1948.

⁶² *Elamtu* is probably of Semitic origin, cf. Akkad. *ellāmu* 'on the opposite side', Assy. *ellamu* 'the one opposite'.

⁶³ Cf., for instance, Bertoldi 1937: 147.

⁶⁴ Cf. Hubschmid 1950: 9-10.

⁶⁵ Cf. Walde and Hofmann 1938-56, s. v. *camox*; Wolff 1954.

1960b). A critical survey of the comparisons he makes reveals the erroneous basis for the Pyrenean-Caucasian hypothesis. Some examples are:

Georg. *mona* 'servant, slave' is compared with Gret. *μῶνα* 'δοῦλοι, μῶνα' (Hesych.). But the IE etymology of the Greek words is beyond doubt: *μν* comes from *δμ*, a Greek phonetic phenomenon, cf. *Ἀμία* > Epidaurian *Μμία*, Ion. *μεσόδη* > Att. *μεσόμενη*, *Κάλυδνα* > *Κάλυμνα*. The Cretan word *μῶνα* corresponds exactly to Ion. *δμῶν* 'she-servant', cf. also Ion. *δμῶς* (gen. *δμῶδός*) 'slave', Hom. *δπο-δμῶς* 'servant'. These words are derived from IE **dmōw-* literally 'belonging to the house', a derivative of **domu-* 'house',⁶⁶ cf. Gr. *οἰκέτης*, *οἰκέυς* 'servant', a derivative of *οἶκος* 'house', L. *domesticus* 'servant, slave' from *domus* 'house'.

Georg. *wenaxi*, Old Georg. *venaqi*, Svanetian *venäq*, Mingrelian, Lazian *binexi* 'vine' are compared with the Cretan gloss *ἴβηνα* 'τὸν οἶνον' (Hesych.). The Caucasian words are undoubtedly related to the IE words **woynā* 'grapevine (wine)' and **woyno-s* 'wine' and therefore are borrowed from an IE (or Semitic) language.⁶⁷ Hesychius' gloss *ἴβηνα* 'wine' is related to Myc. *eqana(qe)* (PY Ua 158.1) = *ε(ι)ῳανα(-κωε)*, cf. *ἰβάνη*, *ἴβανος* 'pail' (*ε* > *ι*), *εἰβω* 'to pour'; the original meaning of this word is 'liquid', cf. L. *liquor* > Fr. *liqueur*.

The assumption that the Lydian-Carian word *τάβα* 'πέτρα (stone, rock)' (St. Byz.) is non-IE is completely arbitrary: this assumption represents an atavism of the antiquated theory of the non-IE character of Lydian and Carian. The word *τάβα* is derived from IE **(s)tābhā* and corresponds exactly to the OPruss. *stabis* 'stone', cf. OHG *staben* 'to be petrified, hard'. These words are derived from IE **(s)tebh-*, **(s)tēbh-*, **(s)tāmbh-*, **(s)tembh-* and are related to the Sabinian word *teba* 'hill, slope' which is probably Oscan-Umbrian from **(s)tēbā* or Latino-Faliscan from **(s)tēbhā*, cf. the name L. *Taburnus mons* (*a* from *ə*), the name of the mountain (and the town) in Campania *Tifata*, which is of Oscan origin (*i* from *ē* and *f* from *bh*) from **(s)tēbhā-tā*,⁶⁸ and the pre-Greek place names *Θήβαι*, *Θήβη* from **(s)tēbhā*.

The Greek word *ἄρτος* 'grain, bread' is compared to the Basque *arto* 'maize'. The Greek word, however, is an Iranian borrowing, cf. Pers. *ārd*, Kurd. *ār* 'flour', Av. *aša-* 'grinded', Hindi, Bengali *ātā* 'flour' from **arta-* < IE **al-to-* pass. part. 'grinded' from **al-* 'to grind'.⁶⁹ Basque *arto* is a borrowing from Greek.⁷⁰

Gr. *σῖτος* 'grain, wheat, food' is compared to Basque *zitu* 'grass, yield, fruit'. But the meanings of these words are different and furthermore the Greek word is derived from **kwido-s* (**kweydo-s* or **kweyto-s*) and corresponds as Pelasgian to Goth. *hwaiteis* 'wheat' from **kwoyd-*, ME *white* 'a kind of wheat' from **kwid-*.⁷¹ There is a similar word in the Hamitic languages: Egypt. *swt*, Coptic *swōt* 'grain'. The Basque word could be of Hamitic (Egyptian or Libyan-Berber) origin.

Gr. *πυρός* 'wheat' is compared to the Georg. *puri* 'grain, wheat' and Span. (dial.) *porona* 'flour', *borona* 'bread made out of maize'. The Greek word, however, has exact correspondences in Sanskrit, Slavic, and Germanic⁷² which cannot be explained as Iberian-Caucasian borrowing. On the contrary, since there are many borrowings from different IE languages in Georgian, especially from Greek, the Georgian word, if it is not a homophony, could be a borrowing from an IE language (Greek).

The modern Sicilian adjective *muturru* 'taciturn' and the Calabrian adjective *mutur-ratu* 'scowling' are not related to Basque *mutur*, *mustur* 'muzzle, hand, leg; scowling' but are derived from L. **mūtūrnus*, a derivative of *mūtus*, cf. L. *taciturnus*.⁷³

⁶⁶ Boisacq 1923 s. v.; Pokorny 1951-69: 199; Bechtel 1921-24: 2, 790; Pisani 1959: 80.

⁶⁷ See section 11.4.1.1. Cf. Klimov 1964: 40, 83.

⁶⁸ Cf. Ernout and Meillet 1951, s. v. *Tifata*.

⁶⁹ See Maccarone 1938: 120.

⁷⁰ Cf. Pisani 1954: 8-9; 1959b: 87.

⁷¹ See section 3.3.

⁷² Cf. Boisacq 1923: 829; Pisani 1959b: 86.

⁷³ Cf. Pisani 1954: 4; 1959b: 80-81.

Basque *patar* 'steep slope', Gasconian *petarro* 'hill, slope' are borrowed from Gr. *πέτρα* 'rock, stone'.⁷⁴

The other examples adduced by Hubschmid for the supposed relationship between the Iberian and Caucasian languages are of the same kind. As a starting point for his suppositions Hubschmid (1953: 91-92; 119) takes Menghin's unrealistic theory and Kretschmer's improbable hypothesis about the 'Raeto-Tyrrhenian' (??) original home: thus his conclusions cannot be expected to be different.⁷⁵

Western Europe (approximately the area west of the Rhine and south-west and south of the Alps), north (northern Scandinavia), northeastern, eastern (east of the Don River) Europe, and the Caucasus were inhabited by tribes and peoples who spoke non-IE languages. During the last quarter of the last century a hypothesis was suggested that the ancient population of the Mediterranean region, including the Caucasus, spoke a common pre-IE language or closely related non-IE languages. This opinion was expressed in Marr's 'Japhetic' theory. Some linguists suggested that this region was more expansive and included the Near East and India, as well as central Europe (the Danube basin) and the greater part of eastern Europe. Pan-Mediterraneism should be considered to be a faith, not a scientific hypothesis.⁷⁶ The following example illustrates the 'evidence' for the pan-Mediterranean theory. Every Slavist knows that the name of the Polish town of *Kalisz*, recorded in Ptolemaeus (2nd century B. C.) in the form *Kaliota*, is of Slavic origin:⁷⁷ *kalū* 'slime, mud' is a common Slavic word which has correspondences in many other IE languages; the formation through the suffix Pol. *-isz* from IE *-īsyō-* is usual in the Slavic languages, cf. the Slovene word *gol-īs* 'barren place' from *gol* 'naked', etc. But according to Alessio (1956: 55), this is a pre-IE root *kal/kar(r)-gal/-gar(r)*(??). Pisani (1954) criticizes the enthusiasm of some pan-Mediterraneists who declare IE words as non-IE.⁷⁸

In general the pan-Mediterranean theory draws its 'evidence' from a supposed unity in Mediterranean toponymy. But the features typical of ancient Aegean and Asia Minor onomastics are lacking in the other Mediterranean regions. The assertion of a language unity among the ancient Mediterranean populations is based on erroneous comparisons of homophones, on names from the Aegean and Asia Minor regions or on Semitic names which were brought to different countries by the Greeks, Etruscans, Phoenicians, and Cretans.⁷⁹

Finally it must be pointed out that at this stage of investigation there is no serious reason for assuming that Sumerian and Elamite are related to any of the language groups which have been mentioned.⁸⁰

⁷⁴ Cf. Pisani 1954: 10; 1959b: 87.

⁷⁵ Meier 1952, Malkiel 1962, and Szemerényi 1963 give detailed criticism of Hubschmid's suppositions.

⁷⁶ Bertoldi (1939: 99), one of the staunchest adherents of the pan-Mediterranean theory, points out that the existence of a common linguistic fund in the entire Mediterranean region is not yet proved, but that this hypothesis must be a 'theoretical prerequisite' for the investigations.

⁷⁷ Cf., for instance, Falkenhahn 1956: 56.

⁷⁸ See also Hubschmid 1962.

⁷⁹ Cf., for instance, *Μασσαλία* > *Marseille* and *Λαυδάριον* in southern France, see Lebel 1956: 271-272.

⁸⁰ Cf. D'jakonov 1954: 61; Dunaevskaja 1954: 77-78.

The investigations of the languages of Asia Minor would be given a great impetus if a detailed comparative-historical grammar and a good etymological dictionary of the Caucasian languages were compiled. The problem of the relation among the northwestern, northeastern, and southern (Cartvelian) languages must be solved: the question is whether there are genuine relationships among these language groups and if so, to what extent are they related (closely or remotely)⁸¹. It is furthermore necessary to examine the ancient languages of western Asia (Hattic, Hurrian, etc.), always keeping in mind that it is possible that there is a relationship between these languages and the Caucasian languages. These are the main tasks of Caucasian studies: the solution of these problems will help to elucidate the problems of the origin of the populations of the Aegean, of Asia Minor, and western Asia.

The scholars who are investigating the ancient Mediterranean languages and the languages of western Asia are confronted with considerable difficulties because these are very different languages and they were scarcely or insufficiently known until very recently. This is why it is often necessary to work on the basis of more or less probable hypotheses in this field. These hypotheses must, however, be founded on facts and not on preconceived ideas. The pan-Mediterranean assertions of Marr, Autran, Oštir, Karst, Alessio,⁸² Menghin, and some others do not contribute at all to the clarification of the problem of the ancient languages of the Mediterranean region.

⁸¹ See Bokarev 1954: 42-43.

⁸² Alessio did not hesitate to include part of the Baltic region in the orbit of pan-Mediterraneism, see Alessio 1946-47: 141-142. For criticism of the pan-Mediterranean thesis see Rohlf's 1966: 25-26; Polomé 1961.

Chapter 8

Balto-Slavic, Germanic, and Indo-Iranian

There are different degrees of relatedness within the language family to which related languages belong. Thus in the Slavic family Bulgarian is very close to Serbocroatian but not as close to Polish. A similar relationship exists between Dutch and German on the one hand and Swedish on the other. The relations between different language groups within the IE family are similar: Sanskrit, for instance, is closest to Iranian: both are part of the Indo-Iranian group, but Sanskrit is not as closely related to Armenian and still less to Irish.

Our task is to clarify to which other IE language groups Slavic is most closely related. For this purpose we shall above all try to investigate the problem of the Balto-Slavic language unity and thereafter the interrelations between Balto-Slavic, Germanic, and Indo-Iranian.

8.1. The Balto-Slavic Language Unity

Slavic and Baltic have many important features in common in phonology, morphology, syntax, word formation, and vocabulary. With the exception of Sanskrit and Iranian, which belong to one common Indo-Iranian group, there are no other language groups in the IE family which are as closely related to each other as Baltic and Slavic: this is a well-known fact.¹ On this basis it is correct to conclude that Baltic and Slavic formed a Balto-Slavic language unity which gradually became differentiated from common IE and existed as a separate common language for a certain period of time.

This thesis, which was universally accepted in the past and which is still dominant now (most linguists support it), is in opposition to Meillet's (1922: 40-49; 1925b) hypothesis of the parallel development of Baltic and Proto-Slavic, with the two languages coming together as a secondary development. Meillet's highly respected opinion had considerable influence, though it is true that very few scholars accepted it entirely (Bügga and Senn)². Some linguists think that this problem cannot be considered to be completely solved³ while others have tried to find a compromise solution (Pisani, Machek, Stang, Fraenkel, Bernštejn).⁴

¹ Recently a number of articles were published on Balto-Slavic language relations: Otremski 1954: 5, 26-42; 6, 28-46; Leumann 1955; Arumaa 1956; Vaillant 1957; Szemerényi 1957; Georgiev 1958a; Lehr-Splawiński 1958; Kuryłowicz 1958; Kiparsky 1958; Ivanov and Toporov 1958; Toporov 1958; Dickenmann 1958; Stang 1971.

² According to Senn (1966), Baltic and Slavic are 'two neighboring dialects'.

³ Cf., for instance, Gornung 1950.

⁴ See Otremski 1954: 27.

There is no other alternative thesis and nobody denies the close relationship between Baltic and Slavic. Thus the problem of the Balto-Slavic language unity is basically the question of whether it is possible to consider Meillet's hypothesis to be probable or not.

I consider it superfluous to adduce the data on the relationship between Baltic and Slavic here: they have been pointed out many times and are well known and accepted.⁵ But it is necessary to clarify the criterion used in determining the closeness or remoteness of relations between groups which belong to the same language family. One can arrive at this criterion by referring to the Indo-Iranian language unity, which is considered to be a completely established fact.

Sanskrit and Iranian show many features in common. Of course, there are differences between them but the features in common predominate and are the decisive element in defining the Indo-Iranian language unity.

As can be seen from the common and proper nouns recorded in the Hittite texts and in documents from the Near East dating from the 2nd millennium B.C., Sanskrit and Iranian became differentiated before the second half of the 2nd millennium B.C.: the numeral *aika-* 'one', which appears in Hittite borrowings and corresponds to Skt. *eka-* 'one', is characteristic of this while we find *ava-* in Avestan and *aiva-* 'one' in old Persian. Thus the common Indo-Iranian language existed no later than the end of the 3rd millennium B.C.⁶

Both classical Sanskrit and Old Persian have changed considerably. The same applies to a greater extent to the later stages of the development of these languages. If no data were available about the earlier stages of the development of Hindi and Modern Ossetian, it would hardly have been possible to establish the very close relationship between these two languages and it would have been difficult to come to the conclusion that an Indo-Iranian language unity existed. Consequently, the Indo-Iranian common language is established on the basis of the most ancient written documents. The oldest part of the *Rigveda* dates not later than the end of the 2nd millennium B.C. and the *Avesta* dates not later than the 7th century B. C. Therefore, in defining the Indo-Iranian language unity, on the one hand, and the Balto-Slavic language unity, on the other, basically different circumstances have to be taken into consideration because Slavic is attested not earlier than the 9th century A. D. and Lithuanian is not attested before the 16th century: that is, Slavic was recorded about 2000 years and Lithuanian about 2500 years *later* than Indo-Iranian. In spite of this the relationship between Baltic and Slavic is obvious, while the relationship between Iranian and Sanskrit from the same period, i. e., about the 10th—15th centuries, is not so clear. Vaillant thinks that the Baltic languages do not differ more from Slavic than Swedish differs from German⁷, and I would add that the separate Slavic languages are as close to each other as are the modern German dialects.

⁵ Cf., for instance, Vaillant (1950: 14), Meillet's disciple and collaborator: "... grammatical study reveals similarities between the two groups which affect the entire linguistic system, the phonology and accentology, the flexion of the names and of the verbs, the usage of the forms, derivation, vocabulary..."

⁶ See section 10.4.1.

⁷ Cf. Vaillant 1950: 14. Cf. also Brückner 1917: 81: "Meillet u. a. . . vermissen vor allem entscheidende, gemeinsame Neubildungen. . . Sie vergessen dabei, dass die indo-iranische

The close Balto-Slavic relationship is evident: at one time these languages formed a unity which existed for a long time; it dissolved after the Indo-Iranian common language dissolved.

Could the relationship which exists between Baltic and Slavic be explained as a parallel development? Otremski (1954: 27) correctly proved the inadequacy of the thesis of parallel development; the history of the IE language family and other language families does not offer a single case of two languages which initially were not very closely related and which later arrived at a kind of similarity, due to parallel development, which is comparable to the similarity between Slavic and Baltic. This kind of a hypothesis cannot be considered to be tenable.

Can the similarity between Baltic and Slavic be considered to be the result of a secondary rapprochement? Linguists are aware of cases of secondary rapprochement between two languages: the Balkan languages — Bulgarian, Rumanian, Albanian, and Greek — are a good example of this. The articulatory basis of these languages is quite similar: they have many syntactical elements in common, and the similarity is obvious in the vocabulary. But these elements differ basically from the common features in Balto-Slavic. The elements which the Balkan languages have in common are the result of an interaction, while in Balto-Slavic the correspondences are not such that they could have been borrowed.

Baltic and Slavic are so close to each other that Lithuanian, which is very conservative in its phonology and morphology, can to a certain degree take the place of Proto-Slavic. Morphology is of special significance in this respect. It is well known that lexical and syntactical elements can easily be borrowed. There can also be a mutual phonological influence between two languages. It is also well known that the morphemes of one language can disappear under the influence of another language. Finally, the morphological system of one language can serve as a model in creating the morphological system of another language. Thus, for instance, the agglutinating Ossetian declension, which has nine cases, is very different from the patterns of declension in the Iranian languages and everything distinguishing the Ossetian declension from the Iranian declension brings it (Ossetian) closer to the declension of the Caucasian languages. Abaev (1956: 68) points out: "But the building material (the formation of the plural, the case endings, etc.) is entirely Iranian". On the whole, the borrowing of morphological elements, i. e., of grammatical endings, is very rare. Therefore, if the morphological structure of Baltic and Slavic originally was not similar it could have become similar due to secondary closeness only 'as far as the model, the architectonics is concerned' and not as far as the genetic identity of the morphemes is concerned.

For this reason the exceptional closeness in the morphological systems of Slavic and Baltic, which is so extensive that Proto-Slavic morphology is almost identical with Lithuanian, is the major argument against the thesis of secondary rapprochement of these languages. This fact indicates the existence of a Balto-Slavic language unity: the genetic identical morphemes,

Gemeinsamkeit ohne die alten Zeugnisse, nur aus den modernen Sprachen heraus, kaum zu erweisen gewesen wäre; im Slavischen sind nun die ältesten Texte um volle zwei Jahrtausende jünger als die vedischen..."

or instance case and verbal endings, cannot be considered to be borrowings but must be inherited from this language unity.

Keeping these facts in mind, one can consider the position of the adversaries to the theory of the Balto-Slavic language unity to be quite odd, for those adversaries must nevertheless accept the exceptional closeness of Baltic and Slavic. Thus Bernštejn (1946: 19) writes: "... independent of defining the nature of the genetic relations between these languages, one could say that no other group of IE languages contributes so much to the most ancient history of Proto-Slavic as Baltic." But the fact that Baltic contributes so much to the most ancient history of Proto-Slavic cannot be "independent of defining the nature of the genetic relation between these languages" since this fact is actually a consequence of the Balto-Slavic language unity which existed before Baltic and Slavic were separated. The hypothesis of parallel development or of secondary rapprochement is not able to explain the existing closeness between these two language groups.

In the discussion above special stress has been put on the importance of the criterion used in defining how close two related languages are to each other because this criterion is lacking in the hypotheses of the parallel development and secondary rapprochement between Baltic and Slavic. Is it not strange that Meillet (1931: 16-37), while trying to refute the obvious fact of the Balto-Slavic unity, is a staunch adherent to the thesis of an Italo-Celtic unity, despite the fact that the data supporting this thesis are very scarce⁸ and far less significant than the data confirming the existence of the Balto-Slavic unity? The entirely different stand taken by Meillet on these two similar problems is strange and inexplicable. It is difficult to call it objective. What the facts show about the arguments supporting the Italo-Celtic and the Balto-Slavic language unities is given below.

In the field of phonology Meillet adduces only one single example of unity between Italic and Celtic, namely the assimilation $p-k^w > k^w - k^w$ (L. *quinque* = Ir. *coic*, Old Gall. *pimp-*), and he himself points out that this cannot be considered as evidence. Yet as far as the phonology of the Balto-Slavic languages is concerned, one can point out not only their common international system but more specifically the development of the IE syllabic liquids and nasals and above all the fact that the specific features of Proto-Slavic phonology can be entirely derived from Lithuanian phonology, or at least from the preliterate stage of its development. The situation is the same in the field of morphology.

Contrary to the few lexical correspondences given by Meillet (1931: 31-32) as proof for the supposed Italo-Celtic unity⁹, the Baltic and Slavic vocabularies offer many exact and typical correspondences. Brückner's (1917: 81) opinion about the vocabulary of these languages is: "here we have an identity which is found only in Indo-Iranian because the Lituslavic correspondences are not a root relationship, but rather the words are often identical as regards their genus, ablaut, and stress." The fact that Trautmann was able to compile a 375-page Balto-Slavic comparative dictionary without in-

⁸ Bolelli (1940) decisively rejects the thesis of an Italo-Celtic language unity. According to Pisani (1956: 175), this thesis still occasionally appears but only in French literature. The Italo-Celtic hypothesis was recently criticized in detail by Watkins, Meid, and Schmidt; see section 10.1.

⁹ There are no lexical Italo-Celtic correspondences, cf. Bolelli 1940: 10, 14.

cluding Old Slavic, Polish or Russian borrowings in Baltic and referring only to Balto-Slavic words inherited from IE is especially significant. Could a similar dictionary be compiled on the basis of Italic and Celtic? Of course not, although Italic and Celtic were recorded in written form many centuries before Slavic and Baltic. Latin was recorded from the 6th century B. C., i. e., 15 centuries before Slavic and 20 centuries before Lithuanian. Therefore Meillet's criterion for defining language unities within the framework of the IE languages is erroneous.

After the common IE language dissolved, a Balto-Slavic language unity, a Balto-Slavic proto-language, existed. This Balto-Slavic unity seems to a certain degree less homogeneous than the Indo-Iranian unity only because Balto-Slavic is recorded 2000 years later than Indo-Iranian: for this reason it is not possible to give more numerous proofs about Balto-Slavic than about Indo-Iranian.

With regard to the relations between language groups such as Slavic and Baltic, one has to choose between two basic concepts: the concept of the proto-language (or common language, language unity, language community) or the concept of secondary rapprochement (or language alliance). The hypothesis of parallel development is untenable: actually, it is only a prerequisite for the second concept, the concept of secondary rapprochement.

Undoubtedly there are certain differences among the opinions held by the adherents of these two basic concepts. Some scholars do not accept the term "proto-language", others consider the unity to be more homogeneous and still others believe that the unity is characterized by greater dialect differences, etc. But these are variants of secondary importance, they are not essential. What is essential is the difference between the two basic conceptions.

A grave mistake is made by these scholars who, like Mathews, think that the thesis of the Balto-Slavic unity represents a consequence of the Schleicherian concept of "the genealogical tree"¹⁰. The thesis of the development of a specific language from a common language is basically different from the investigation of languages in order to determine their relationships within a given family of languages. Thus the Slavic comparative-historical grammar offers numerous facts which clearly show that a Proto-Slavic language once existed, but this is independent of the problem of the origin and development of the specific Slavic languages (for instance, the linear conception of the "genealogical tree" or a compromise thesis or any other point of view).

Mathews makes another grave error in thinking that it is possible to take the "synchronic systems" of the literary languages, for instance, Russian and Lithuanian (1958: 41), as a starting point for solving this problem. The problem of the structure of a language in a certain stage of its development is above all a synchronical problem, while the problem of the relationship of one language to another in a language group or family is a comparative-historical problem, i. e., a diachronic problem: for instance, the structure of contemporary Armenian is predominantly of the Caucasian type, while the material from which this structure is built is of IE origin. Similar-

¹⁰ Cf. Mathews 1958: 27-28: "the theory of the genealogical tree created... the hypothesis of the unity of the Balto-Slavic languages."

ly, the structure of contemporary Bulgarian is considerably different from that of contemporary Polish but their building material is the same: it is derived from Proto-Slavic.

The criterion for defining the closeness or remoteness of the relationships between language groups within the IE family is independent of the concept of the disintegration of common IE. This criterion is determined on the basis of the qualitative and quantitative presence of common elements, both inherited and innovated, the latter being more important. Through comparative analysis of each language group a norm for defining the closeness or remoteness of the language relationship is worked out.

This criterion is the solid basis on which the concept of common Balto-Slavic is built: it is shared by the majority of linguists despite the great respect they have for Meillet. The lack of such a criterion for determining the relationships among IE language groups led Meillet to the absurdity of negating the obvious data on the Balto-Slavic unity and to tenaciously adhering to the scarce and unreliable data of a supposed Italo-Celtic unity.

The deficiency of this hypothesis is clear even to its few adherents, as can be seen in Bernštejn's article (1958). Realizing the futility of Meillet's hypothesis, Bernštejn tries to detach himself from the opinion of his respected teacher, but in reality his thesis of a "language con-community" (*jazykovaja soobščnost'*) or a "language alliance" is not at all different from the thesis of "the secondary rapprochement" except in its terminology. Yet at the same time the eminent Slavist Vaillant, Meillet's disciple and close collaborator, as well as Otrebski gave up their earlier views and have successfully worked on the basis of the existence of common Balto-Slavic: a specialist can indeed modify his previous views while he digs deeper into a problem.

In Proto-Slavic and in Baltic there are a large number of important elements in common which affect of their linguistic structure — morphology, syntax, phonology, word formation, and vocabulary. The data are given in a number of well-known articles and books, so there is no need to enumerate them here. I would like to dwell only on the matter of the closeness of these two languages as regards the verbal system. Recently scholars such as Endzelin, Stang, and Leumann have established more correspondences between the Baltic and the Slavic verb. Thus the existence of the future OBG (ORuss.) participle *byšest-* (from *byti* 'to be') clearly shows that an exact correspondence to the Lithuanian future in *-s-* (1st pers. sing. *sùksiu* from *sùk-ti*, future part. *sùksiąs*) existed in Proto-Slavic. Furthermore, the Swiss linguist Leumann exhaustively proved that the Lithuanian preterite in *-o* and *-ė* (3rd pers. sing. *sùko* from *sùk-ti*, *matė* from *matyti*) and the Slavic aorist in *-a* and *-ě* (OBG 3rd pers. sing. *bira*, *sūsa*, *tesa*, *mīnē*) have a common origin: they come from a common Balto-Slavic prototype. These data and many more clearly show the close relationship between the Baltic and the Slavic verbal systems.

The thesis of the existence of Balto-Slavic makes it possible to clarify some phenomena in Baltic and especially in Proto-Slavic: those who deny the fact that common Balto-Slavic existed deprive themselves of the opportunity of arriving at a correct understanding of numerous phenomena in these languages.

In speaking of a common Balto-Slavic language we do not mean that the simplistic Schleicherian scheme of development is being adopted. This common language was not as united, homogeneous, and compact as a contemporary normalized literary language. It was a unity of closely related dialects which, due to certain historical circumstances, were separated from common IE for a long period of time. The process of disintegration in the Balto-Slavic unity, as well as its division thereafter into Proto-Slavic and Baltic, was undoubtedly a very long and complex process. Unfortunately, there are not sufficient data to make it possible to clarify all the details and therefore we must restrict ourselves to a simple statement of the facts.

Is it possible to define the time at which the Balto-Slavic unity, or the Balto-Slavic proto-language, existed? There are sound reasons for believing that there was a southern Slavic dialect unity three to four centuries before the most ancient Slavic texts were written (from the 4th to the 8th century A. D.). A period of several centuries was necessary for the separation of common Slavic into dialect groups, i. e., the last stage of common Slavic ended during the first centuries of the 1st millennium A. D. The common Slavic or Proto-Slavic period, that is when Slavic was already separated from Baltic and existed as a separate IE language, must have lasted for quite a long time. This can be assumed on the basis of numerous specific common Slavic changes which took place during this period and which distinguished Slavic from Baltic. The Proto-Slavic period lasted for not less than two thousand years.¹¹ A period of several centuries was necessary for the separation of Proto-Slavic from Baltic. And thus we reach the assumption that the end of the Balto-Slavic unity could not have been later than the beginning of the 2nd millennium B.C. Balto-Slavic shows certain specific common features, i. e., innovations, which would have needed a long period of time to develop. Therefore, the most general and approximate chronology of the development of Balto-Slavic is approximately as follows.

The period of the Balto-Slavic unity (Balto-Slavic proto-language): 3rd millennium B. C.

The transitional period: the end of the 3rd millennium and the beginning of the 2nd millennium B.C.

The Proto-Slavic period: 2nd and 1st millennia B.C.

The transitional period: the beginning of the 1st millennium A.D.

The southern Slavic dialect group: 4th-8th centuries A. D.

There are differences between this chronology and Lehr-Splawinski's chronology. This is because Lehr-Splawinski is of the opinion that common IE started to disintegrate towards the beginning of the 2nd millennium B.C. This view is the basis of his chronology: he consequently allots only about 300-500 years¹² to Balto-Slavic which is far from sufficient. Furthermore, on the basis of archaeological assertions he assumes that the separation took place between 1500 and 1300 B. C.¹³ According to the most recent data, we can consider the disintegration of common IE to have taken place much earlier

¹¹ Cf. Słowski 1956: 101.

¹² On Lehr-Splawinski's theory see the article by Falkenhahn (1956).

¹³ Cf. Falkenhahn 1956: 77.

than has been supposed previously.¹⁴ Furthermore, there are sound reasons for assuming that the people of the "Fotjanovo" culture in the 3rd-2nd millennium B. C. were Baltic tribes.¹⁵

8.2. Germanic, Balto-Slavic, and Indo-Iranian

The problem of the position within the IE family of Balto-Slavic in relation to Germanic and Iranian has interested linguists since the very beginning of comparative-historical linguistics. The first scholar to point out the close relationship between Germanic and Balto-Slavic was Casper Zeuss, whose opinion was accepted by Grimm. Later Schleicher worked out this relationship in detail and included it in his scheme of the "genealogical tree". At the beginning the hypothesis of a Balto-Slavic-Germanic unity was universally accepted. This opinion was shared by Zeuss (1837: 18-19), Grimm (1848: 1030, 101-102), Schleicher (1852: 141-142; 1858: 18-19; 1861-62: 7), Lottner (1871), Curtius (1858-62), Fick (1873), Hassencamp (1876), etc.¹⁶ But Bopp, Kuhn, and Pott, who took the treatment of the gutturals into account, were inclined to accept the existence of a closer relationship between Balto-Slavic and Indo-Iranian.

The theory of the three series of gutturals was established during the late 1870's and the 1880's and was dominant for a long time: von Bradtke (1888) classified the IE family of languages into two dialect groups, *centum* and *satem*, on the basis of it, and this classification became universally accepted: Balto-Slavic fell in one group and Germanic fell into another. From then on the concept of a Balto-Slavic-Iranian relationship was prevalent. But since facts confirming the closeness of Balto-Slavic to Germanic were numerous and obvious, some linguists suggested that a secondary unification between Balto-Slavic and Germanic had taken place.¹⁷ As we shall see below, the data on the closeness of these groups are such that they exclude secondary rapprochement.

The chief argument in favor of a close Balto-Slavic-Indo-Iranian relationship and against the Balto-Slavic-Germanic affinity, was from the beginning the treatment of the IE gutturals.¹⁸ This argument was pointed out by Bopp, Kuhn, and Pott; the other scholars who adhered to the opposite standpoint had to fight against it. As a result, during the 1870's J. Schmidt (1872: 10, 16) and Leskien (1876: XXIV-V) had to take a compromise stand on this question (1872: 10, 16).¹⁹

¹⁴ See sections 11. 1-2, and 11.5.

¹⁵ Cf. Serebrennikov 1956; Moora 1958.

¹⁶ See also Toporov 1955: 248-249.

¹⁷ Cf. Hirt 1905-06: 1, 97, 127; 1905-07: 2, 591; Feist 1928.

¹⁸ Cf., for instance, Bach 1943: 29: "Als auffallende Gemeinsamkeiten nennen wir hier den übereinstimmenden Bau der Zahlwörter elf und zwölf..., sowie die Tatsache, dass der Dat. der Mehrzahl mit einem *m*-Suffix gebildet wird... Allerdings zeigt schon die Tatsache, dass das Germ. zu den Kentum-, das Balt.-Slav. dagegen zu den Satemsprachen gehört..., wie fern sich beide in anderem stehen."

¹⁹ J. Schmidt reached the following conclusion: "... we must acknowledge that Lithuanian is on the one hand inseparably connected with Germanic and on the other hand equally inseparably connected with Arian." Leskien (1876: XXIV-V) thinks that there is no evidence for the existence of a Balto-Slavic-Indo-Iranian (p. XXX) but also that there are no specifically close relations between Balto-Slavic and Germanic.

For the same reason Porzig (1954a: 143, 147) reached the untenable conclusion that there was a close relationship between Germanic and Latin, despite the fact that the analysis of the data adduced in his book is clearly in favor of the close relationship between Germanic and Balto-Slavic. His conclusion is: "The common innovations in Germanic, Baltic, and Slavic confirm their continuous closeness from the common IE period. . . until the first half of the Iron Age." And further on: "The ancient closeness of Germanic, Baltic, and Slavic language regions and their mutual influence is a well established fact in spite of the doubts often expressed by Hirt. Germanic had closer relations with Baltic and Slavic than with any other language outside the western group. It probably is more closely related only to Latin, thus being different from the other languages of the western group which have very slight connections with the eastern languages." Thus Porzig has correctly stressed the fact that Germanic and Balto-Slavic are close to each other. But starting from the erroneous *centum-satem* theory he could not reach the correct conclusions.

Some scholars think that Leskien has already proved that closer genetic relations between Balto-Slavic and Germanic did not exist. Thus Bernštejn, in his prospectus of the "Outline of the Comparative Grammar of the Slavic Languages" (1946: 20), admits that the investigation of the problem of the relationship between Slavic and Iranian is worthwhile but that the investigation of the same problem between Slavic and Germanic is not: "In the preface a description will be given of the present state of the Slavic-Iranian problems, pointing out the main features and showing the ancient genetic relations between Slavic and Iranian". And further on: "In this book no mention will be made of the problems concerning the Slavic-Germanic relations, which go back to the period of the disintegration of common IE. There is no reason to discuss them since they were established by Leskien and others a long time ago." I think, there is a misunderstanding here. As is well known, during the first half and middle of the 19th century the majority of linguists adhered to the theory of a close relationship between Balto-Slavic and Germanic. Leskien (1876: 157) did not refute the view of a close relationship between Germanic and Balto-Slavic as a whole; he only refuted the hypothesis of the existence of "especially close relations" between them ("für eine besonders nahe Beziehung des Slavisch-Litauischen zum Germanischen"). However, Leskien categorically rejected the idea of a close relationship between Balto-Slavic and Iranian: "I am of the opinion that the criteria offered by Schmidt for establishing the mutual relations among the Slavic dialects do not by any means have the significance which he ascribes to them, and they do not prove what they should prove; and I also think the same about the speculations on the close relations between Balto-Slavic and Indo-Iranian."²⁰ He continues: "Hence it is not proved to me that Slavic-Lithuanian and Arian have a relationship which does not allow a connection of Slavic-Lithuanian with one or more IE groups, with all the European languages

²⁰ Leskien 1876: XXII: "Meine Ansicht ist daher, dass die von Schmidt für die gegenseitige Verhältnisse der slavischen Dialekte aufgestellten Kriterien durchaus nicht die Bedeutung haben, welche er ihnen zuschreibt, dass sie das nicht beweisen, was sie beweisen sollen; und ich glaube dasselbe von den Gründen, die Schmidt... für eine nahe Berührung des Slavolettischen mit dem Arischen, für die Untrennbarkeit dieser beiden Sprachen aufstellt."

in a group, and the statement that this group had a specific development which was different from that of Arian" (1876: 157).

If Leskien is so highly respected, why was his view not taken into consideration with regard to the problem of the relationship between Slavic and Iranian? No attempt at imposing a veto on the investigations of the relationship between Balto-Slavic and Germanic is grounded. Obviously this idea is a consequence of the erroneous concept of the problem of the Balto-Slavic relationship.

During the last few decades this problem has been exhaustively examined by Meillet (1902-05; 1926b), Hirt (1905-06: 97; 1905-07: 591; 1921-37: 35-36), and Arntz (1933)²¹ who adhered to the view of a closer relationship between Balto-Slavic and Indo-Iranian, as well as by Fraenkel (1950: 73-75; 113-115), who was inclined to include Baltic, Slavic, and Germanic in a "language alliance", and by Porzig, whose opinion has already been stated; and also by myself (1932: 69-72), by E. Georgiev (1941), and T. Lehr-Splawinski (1946), who adhered to the view of a closer relationship between Balto-Slavic and Germanic.²² Arntz and E. Georgiev have exhaustively analyzed all the facts on this problem. Our task is to compare the arguments for the two theories and to draw a conclusion. First, however, we have to verify the opinion that the treatment of the gutturals is the major argument in solving the problem of the Balto-Slavic relations.

Geographical distribution was considered to be a very important argument in favor of classifying IE family of languages into the *centum* and *satəm* groups: western languages = *centum*, eastern languages = *satəm*. After the discovery of Hittite and the other languages in Asia Minor, as well as Tocharian, this argument became untenable.

The second argument — the treatment of the gutturals — is either becoming extremely important or is losing all its value depending on the different opinions about the theory of the IE gutturals.

The adherents to the tripartition of the IE gutturals (palatals, [plain] velars and labiovelars) — and also those who accept the bipartition of prepalatals and postpalatals-labiovelars — consider this argument to be very important because in this case the shift of these phonemes seems to be very specific. But for those who assume that there were two series of gutturals — velars (phonemes *k*) and labiovelars (phonemes *kʷ*) — and that the sibilants (or affricates) appeared due to palatalization of the velars, this argument loses its importance since the palatalization is a very ordinary phenomenon (a "universal") which is very frequently met and which leads to similar results in different languages independent of each other. A trivial example is: in the French words *cent* (= *sā*) 'hundred' and *qui* (= *kī*) 'who', and in the corresponding words in Hindi, *sao* 'hundred' and *kaon* 'who', the initial phonemes *k* and *kʷ* shifted into *s* and *k*, i. e., the result of the shifts are identical. If the most ancient stages of the development of the French language were not known, French would probably have been classified with the *satəm* languages. But there is no genetic connection between the phonetic changes in Hindi, on the one hand, and in French, on

²¹ See also Meillet and Vaillant 1934: 8-9. The arguments in favor of the Indo-Iranian-Balto-Slavic affinity were recently systematized by Burrow (1955: 19-21).

²² Cf. also Lehr-Splawinski 1955: 160 and Falkenhahn 1956: 64. On the vocabulary see A. Scherer 1956; Stang 1971.

the other: this is an ordinary ("universal") phonematic change which led to the same results despite the fact that it had taken place in different languages independent of each other.

The following fact from the history of Greek is very significant in this respect: some linguists thought there was a genetic relationship between the palatalization of the labiovelars in Indo-Iranian, in Slavic, and in Greek ($k^we >$ Indo-Iran. *ca*, Slav. *če*, Gr. *τε*). The decipherment of the Mycenaean texts showed that the palatalization of the labiovelars ($k^we >$ *τε*) took place within the course of the history of the Greek language and that the old hypothesis was untenable.²³

The following fact is also important: the palatalization of the IE labiovelars in Slavic and Indo-Iranian brought about almost the same results, cf. OBG *četyre* 'four' and Skt. *catvaraḥ* 'four', OBG *živū* = Skt. *jīvaḥ* 'alive'.²⁴ But despite this similarity there is no genetic relationship between these phenomena since *k*, *g* remain unchanged in Lithuanian: cf. *keturi* 'four', *gyvas* 'alive'. If this were not so, we should have to assume that Slavic was closer to Indo-Iranian than to Baltic. Furthermore, a similar shift took place in Lettish without having any connection with the Slavic palatalization: in Lettish palatalization took place during the 13th century A. D., while in Slavic it took place much earlier.

Therefore, adherence to the view that the sibilants (or affricates) originating from velars appeared in the so-called *satəm* languages due to palatalization does not make it necessary to assume that the appearance of these phonemes in Balto-Slavic, Albanian, Armenian, and Indo-Iranian demonstrates a genetic relationship. On the contrary, since the palatalization (and the assibilation accompanying it) is a usual and frequent ("universal") phenomenon, it must be accepted that these phonemes appeared in these languages completely independently of each other and at different times.

And thus from our point of view the 'guttural argument' is completely untenable (see section 2.1).

It is well known that the so-called *centum* languages do not form a single related group. The Greek language has no specific relationships with the western languages, while on the contrary it demonstrates close relationships with Armenian and Indo-Iranian. Also, the Hittite-Luwian group has no specific relations with any of the so-called *centum* languages but is closely related to the Thracian-Pelasgian group. Tocharian does not have specific features in common with the western group but it shows a close relationship with Balto-Slavic.²⁵ On the whole, the classification of the IE languages into two dialect groups, *centum* and *satəm*, on the basis of the treatment of the gutturals, is a serious impediment to the correct definition of the relationships between the languages in the IE family.²⁶

Let us now analyze the remaining arguments about the position of Balto-Slavic in the IE family. We shall begin with morphology since the presence of similar morphemes is the most important evidence in favour of a close relationship between two languages: the morphemes are the most difficult elements to borrow.

²³ See section 2.1.

²⁴ Slav. *ž* is derived from *dž* = Skt. *j*.

²⁵ See section 9.1.

²⁶ See section 2.6.

The relationship between Balto-Slavic and Germanic becomes obvious through analysis of the data provided by the **morphology**.

(1) The case endings in *-m-*: while in the other IE languages the phoneme *-b^h-* or its later forms are found in some of the cases, *-m-* appears in Balto-Slavic and Germanic only, cf. dat. pl. OBG *vlūko-mū*, Lith. *vilkā-ms* (*vilkamus*), Goth. *wulfa-m* but Skt. *vrkebhyaḥ*. One cannot speak of borrowings here: this common morpheme can only be derived from an older language unity. This argument, which is not the only one by far, is more significant than all the other evidence in favor of the thesis of a Balto-Slavic-Iranian relationship because if it is possible to accept the thesis of a secondary rapprochement between Balto-Slavic and Indo-Iranian with regard to all their common features, one cannot accept this explanation for the case forms in *-m*.

(2) A complete identity exists in Balto-Slavic and Germanic in the declension of the feminine participles: cf. nom. sing. OBG *berqšti*, Lith. *auganti*, Goth. *frijondi*, acc. OBG *berqštq*, Lith. *augančq*, Goth. *frijondja* from IE *-i* and *-yam*, while in Sanskrit there is *-i* and *-im*, in Greek *-yā* and *-yam*.

(3) The existence of a single form for the three genders in the plural of the oblique cases of the pronouns is typical of Balto-Slavic and Germanic, as for instance OBG *tēmū* = Lith. *tiems* = Goth. *þaim* dat. pl.²⁷

(4) The following innovations in the numerals are typical:

(a) Innovations meaning 'three tens' are used in Balto-Slavic and Germanic instead of unified names for the tens; cf. OBG *tri desēti*, Lith. *tris-desimt*, Goth. *þreis tigjus* 'thirty', but L. *triginta*, Gr. *trιάxonta* 'thirty', etc.

(b) Lith. *vienuolika* 'eleven' and *dvylika* 'twelve' correspond to Goth. *ainlif* 'eleven' and *twailif* 'twelve'.

(c) the numeral 'thousand': OBG *tysqšta*, Lith. *tūkstantis*, Goth. *þūsundi*.

(5) The verbs which end in *-nqti* in OBG have exact correspondences with the Gothic verbs in *-nan*, cf. OBG *u-žasnqti* and *u-žasiti*, Goth. *us-geisnan* and *us-gaisjan*. In Lithuanian the nasal suffix became a nasal infix and thus the forms *pabundū* and *pabūdinu* correspond to the pair of verbs cited above.

(6) The flexion of the causative verbs ending in *-éyō* in Balto-Slavic and Germanic has forms in *-ī-* (*-y-*) while in the other IE languages only *-ey(ō)* appears, cf. OBG *prositi*, *prošq*, *prositū*, Lith. *prašyti*, *prāšau*, *prāšo*, Goth. *-nasja*, but Skt. *bodhāyati*, Gr. *ποσέω*, L. *doceo*, etc. (see below).

The adherents to the opinion of the closeness between Balto-Slavic and Indo-Iranian are not in a position to adduce even a single example from morphology which could equal the examples adduced for the closeness between Balto-Slavic and Germanic.

E. Georgiev has criticized Arntz's arguments; we shall now analyze the argumentation of the English scholar Burrow, who has tried to systematize all the data on this problem.

(1) The nominative without *-r* of *r*-stems: OBG *matī*, Lith. *môtė*, Skt. *mātā* 'mother'. This argument is untenable since the same phenomenon is recorded in Macedonian (pre-Slavic), cf. Mac. *āđŋ* = Gr. *αἰθῆνη* and also in

²⁷ Cf. Fraenkel 1950: 83.

Mycenaean Greek, cf. *mate* = μάτη, Att. μήτηρ, *pate* = πατήρ, Att. πατήρ.²⁸ These languages, therefore, have preserved the ancient forms while in classical Greek and in Latin the *-r* was restored in the nominative under the influence of the oblique cases.

(2) The locative pl. in *-su*: OBG *vlüčěxu* = Skt. *vr̥keṣu* from **wl̥kʷoy-su*, while in Greek we find *-σι* (dat. pl.). This argument is untenable as well. Slavic and Indo-Iranian have preserved the old form while in Greek the original ending *-su* shifted into *-σι* under the influence of the ending for the dat.(-loc.) sing., cf. pl. ποσί, sing. ποδί. The same process took place in Lithuanian, cf. loc. pl. *výr-uose* and sing. *výr-e*.

(3) The dual inflection is very similar and contains elements which are not found elsewhere. This argument is also untenable since it refers to a case of the preservation of old forms and not to innovations. The dual category was dying out long before the most ancient written documents of the separate IE languages appeared. It was preserved the most in Indo-Iranian and Balto-Slavic. This explains why such forms appear in these two language groups only and why there are differences even between Baltic and Slavic. Thus the ending for the gen.-dat. dual OBG *-oju* and Skt. *-ayoḥ* are derived from *-oy-ows*. This ending is considerably different from Att. *-ων*, while Hom. *-ων* and especially Arc.-Cypr. *-ωνν* are already quite close to the original form.

(4) There is a similar development in the singular stem of feminine nouns in *ā* (OBG *tojō*, *r̥kojō* and Skt. *tāyā*, *sénayā*) and of the loc. sing. (Lith. *rañkoje* and Skt. *sénāyām*). These endings, however, do not correspond to each other completely: they do represent remnants of an archaism (*-āy-* stems) in the endings of some languages.²⁹

(5) There is a close similarity in the declension of the *i*- and *u*-stems, as is illustrated by the dat. sing.: OBG *-ovi*, Skt. *-āve* from IE *-ew-ey*. This is a case of the preservation of an ancient form. The same form is recorded in Mycenaean Greek: *-ewe* = **eFe(i)*. This fact is of special significance. It clearly shows that the preservation of identical forms which were inherited from PIE cannot be used as evidence for a close relationship between language groups. In this case the best evidence is the innovation only.

(6) Similarities in the pronouns:

(a) OBG *azū* and Skt. *ahám* 'ego'.

(b) OBG *mę* = Skt. *mām* acc. sing. 'me'.

(c) OBG *mene* = Av. *mana* (Skt. *mama*) gen. sing. 'mei'.

(d) OBG *tomu* = 'huic', OPruss. *kasmu*, Skt. *tásmai*, OPruss. *stessiei*, Skt. *tásyai* dat. sing. m. and f.

(e) Preference for the interrogative stem **kʷo-* as opposed to the stem **kʷi-*, Lith. *kàs* = Skt. *ka-h*.

(f) Certain pronominal stems in common: OBG *ovū* = Skt. Av. *ava-*; Lith. *anàs*, OBG *onū* = Av. *ana-*.

These examples cannot be used as evidence for a closer relationship between Balto-Slavic and Indo-Iranian since the majority of them have correspondences in other IE languages as well: thus they are remnants of an old stage and are not common innovations.

²⁸ See section 3.1.7.1-4.

²⁹ See Georgiev 1965b.

OBG *azī*, Lith. *aš*, OLith. *eš* do not correspond to Skt. *ahám*, see section 2.4.5. As for OBG *mę* and Skt. *mām*, cf. Phryg. *μεν* (and *μεμε*) 'me'.

OBG *tomu* is derived from **tomōw* and does not correspond exactly to the Skt. *tasmai* from **tosmōy* or **tesmoy*; a similar form appears in Phryg. *σεμιν* 'huic'. OPruss. *stesmu* and Skt. *asmāi* 'illi' correspond to the Umbr. *esmei* 'huic'. All these forms go back to PIE.

The stem **k^{wo}-* of the interrogative pronoun is also typical of Germanic as well as of other IE languages, cf. Goth. *hwas*, G. *wer* from **k^{wo}-*.

The OBG pronoun *onū* has correspondences in Hitt. *annis* 'this' while OBG *onū* has correspondences in Dorian *αἴς* = *αἰτός*.

(7) The following correspondences are pointed out in the verbs:

(a) Similarities in the s-aorist, e. g., *vṛddhi* of root: OBG inf. *vesti* and aor. *vēsū*, Skt. pres. *vāhati* and aor. *āvākṣam*; *-ū* and *-am* from *-om*. But Slavic *-ū* comes from *-ŋ³⁰* and the lengthening of the root vowel in the sigmatic aorist preserves the old form, cf. L. *vēxi* from *veho*.³¹

(b) Future in *-syo-*: Lith. *dūsiau* and Skt. *dāsyāmi*. This argument is untenable since the Greek future *δόσω* can also be derived from *-syo* while Lith. *dūsiau* can be = Gr. dial. *δωσέω* from *-seyo*.³²

(c) The causative is well developed in both groups, and many identical forms can be quoted, e. g., Skt. *bodhāyati* 'he awakens', OBG *buždq*, *buditi*.³³ This point actually is more a proof for a closer Balto-Slavic-Germanic relationship. The causative verbs of the type *bodhāyati* are typical of almost all IE languages, cf. Gr. *φωγέω* together with *φάγω*, L. *noceo* together with *nex*, etc.³⁴ But in Indo-Iranian, Greek, and Latin the endings are *-éyō*, *-éyeti* while in Balto-Slavic and Germanic the endings *-yō*, *-i-* appear, cf. Skt. *bodhāyāmi*, *bodhāyati*, L. *noceo*, *nocet* from *-eyeti*, but OBG *buždq*, *buditi*, Goth. *-wardja*, *-wardels*, *satja*, *satijis*, etc. Cf. especially OBG *plūniti* = Goth. *fulljan* from OBG *plünū* = Goth. *fulls*, OBG *cēliti* = Goth. *hailjan* from OBG *cēlū* = Goth. *hails*.³⁵ These forms have correspondences in Latin but as far as their meaning is concerned they are typical only of Balto-Slavic and Germanic.

As far as the verb is concerned, Burrow (1955: 20) is compelled to recognize that "in the conjugation of the verb features special to Indo-Iranian and Balto-Slavic are not remarkably common".

As a whole, there are no important features in common between Indo-Iranian and Balto-Slavic in the field of morphology. On the contrary, there are many very important morphological features in common between Germanic and Balto-Slavic.

With regard to word formation the following identical Balto-Slavic and Germanic suffixes can be cited:

(1) OBG *-iskū* = Lith. *-iškas* = G. *-iska-*, cf. OBG *slověn-iskū*, Lith. *gaspador-iskas*, Goth. *þiud-isks*.

(2) The suffix *-snā*, *-snī* is used for forming abstract nouns: OBG *pēsni* 'song', Goth. *fulh-sni* 'ἁρμονία'.

³⁰ Cf. Meillet and Vaillant 1934: 248, 83; Schwyzler 1934-39: 750; Georgiev 1969f: 38; cf. Gr. *ῥδαιζ-α* with *-α* from IE *-ŋ*.

³¹ Cf. Schwyzler 1934-39: 751; Leumann and Hofmann 1928: 333.

³² Cf. Schwyzler 1934-39: 787.

³³ Burrow 1955: 20.

³⁴ Cf. Brugmann 1922: 535.

³⁵ See Meillet and Vaillant 1934: 239.

(3) OBG suffix *-stvo* corresponds to the Gothic suffix *-stw*, cf. OBG *bēstvo*, Goth. *waúrstw*.

(4) OBG suffix *-tva* corresponds to the Goth. *-þwo*.

In the field of phonology the treatment of the cluster *rn* + consonant (*r* = liquid, *n* = nasal) is characteristic of Balto-Slavic and Germanic while in the other IE languages it appears as *rn* + consonant, cf. OBG *kręnq* from **krętnq*, Lith. *slīnkti*, Goth. *drugkan* while in Sanskrit it is *krntati*.

An essential difference between the phonology of Germanic and that of Balto-Slavic is the consonant shift of the occlusives in common Germanic. But the Germanic consonant shift had yet not been completely precluded during the 1st century B. C. and it is hardly probable for it to be considered older than the middle of the 1st millennium B.C. Thus this phonematic change, which distinguishes Germanic from Balto-Slavic, is a comparatively late development.

The comparative phonology of Balto-Slavic and Indo-Iranian shows a similarity in the treatment of the gutturals — about which we have already spoken — and a similarity in the treatment of the Indo-Iranian shift of *s* into *š* after *i*, *u*, *r*, *k*, which corresponds to the Slavic shift *s* > *x* after the same phonemes. This fact is cited as being exceptionally important evidence in favor of the thesis of a closer relationship between Slavic and Indo-Iranian. But the following objections can be made:

(1) This phenomenon is not common Balto-Slavic: it does not appear in Lettish and Old Prussian and it appears in Lithuanian only after *r* and *k*,³⁶ cf., for instance, *viršus* = OBG *vrīxū* 'peak' but Lith. *blusà* — OBG *blūxa* 'flea'.

(2) There is a difference in this respect between Slavic and Indo-Iranian: after *i*, *u*, *r*, *k* the consonant *s* in Slavic does not change before a consonant, while in Indo-Iranian it appears as *š*, cf. IE **porso-s* > OBG *praxū* but IE **přs-ti-s* > OBG *přstī*, OBG *unīzda*, but Av. *mīzdam*.

(3) In Slavic an *x* appears but in Indo-Iranian we find an *š*.

(4) This phenomenon is not common Indo-Iranian. Investigation of the modern Indian languages shows that some of them have preserved the *s* unchanged after *u*, for instance, the northwestern Kafiri (Dard) languages, cf. *mūsə* 'mouse' from IE **mūs-*, *dōs* 'yesterday'³⁷ = Skt. *doṣā* 'yesterday night', Mod. Pers. *doš* 'last night'.

(5) It is not pertinent to consider this phenomenon to be common to Balto-Slavic and Indo-Iranian since in Indo-Iranian the shift took place after the following Indo-Iranian phonetic changes: IE *l* > Indo-Iran. *r* and IE *ə* > Indo-Iran. *i*, cf. Skt. *bhāṣ-* 'to speak': Lith. *baīsas* 'voice'; Skt. *pāṣ-ānaḥ*, Ved. *pāṣ-yā* 'stones', Kafiri *parši* 'rock, mountain', Afghan (< Dard.) *parša* 'rock': Gr. *πέλλα* 'stone' from **pelsā*, G. *Fels* 'rock'; Skt. *taviśāḥ* 'strong', *tāviṣi* 'strength, power' = Av. *taviši* f. 'strength, power' from **tewās*.

(6) Furthermore, these phonematic changes are also found in other languages, for instance: L. *ks* (= *x*) > Span. *x* (= *χ*); IE *ks* > Alb. *h*; IE *rs* > Arm. *rš* > *ř*; IE *rs* > common Gr. *ρσ* > Att. *ῥῥ* (= *rh*); etc.

Therefore, there are sound reasons for believing that this phonematic change had taken place independently and at different times in Slavic and

³⁶ Cf. Fraenkel 1950 : 113.

³⁷ Cf. Burrow 1955 : 22; Edel'man 1965 : 25.

in Indo-Iranian.³⁸ Thus, for instance, the shift of *s* into *x* is recorded in Slavic as well as in some modern Indian dialects which have no genetic connection with Slavic. Nevertheless this phonematic phenomenon can be considered to be an isophoneme of Balto-Slavic and Indo-Iranian since, as we will see below, despite the fact that Balto-Slavic is closely related to Germanic it cannot be denied that it has some points in common with Indo-Iranian.

The following explanation, which was given by Brugmann (1884), seems to be very plausible: "At the time when some of the features of the future language groups (out of which Indo-Iranian and Balto-Slavic later developed) started to appear, in the southeastern portion of the not yet dissolved common IE area, the palatalization of the velars before *e, i, y* and the shift of *s* > *š* after *i, u, r, k* was beginning. At that time Germanic, Balto-Slavic, and Indo-Iranian were not yet separated. Later Balto-Slavic-Germanic broke away and formed a specific Northern dialect group."

The very close relationship between Balto-Slavic and Germanic is obvious not only in the morphology and word formation but also in vocabulary. The exact lexical correspondences between these languages are numerous and this fact is acknowledged even by the adversaries of the theory of a close relationship between these two languages. In his book (1941) E. Georgiev enumerates several hundred Balto-Slavic-Germanic correspondences.⁴⁰ Some of the most typical are:

Nouns

**aldh-* 'trough, boat': OBG *al(ü)di(i)*, Lith. *aldijà, eldijà* f. 'boat', Norwegian *olda* 'trough' (and Toch. A and B *olyi* 'boat', see section 9.7).

**asen-* 'harvest, summer, autumn': Russ. *osen*, OPruss. *assanis* 'autumn', G. *Ernte* 'harvest'.

**dʰrowgho-s* 'friend': Russ. *drug*, Lith. *draugas* 'friend', Old Scand. *draugr* 'man'.

**ere(m)bh-* 'partridge': Russ. *rjab-ka*, G. *Rebhuhn* 'partridge'.

**gholto-m, *ghelto-m, *ghlto-m*: OBG *zlato*, Lett. *zēlts*, Goth. *gulþ* 'gold'.

**gweb(h)ā, *gweb(h)ā* 'frog': OBG *žaba*, OPruss. *gabawo*, G. *Quappe*.

**gwrhnū, *gwerhnu-, *gwerhneh* 'mill': OBG *žrūny*, Lith. *girna*, OHG *kuerna* 'mill'.

**krēk-, *krēk-, *krenk-, *krk-* 'frog eggs': Russ. dial. *krjak* 'frog (eggs)', Lith. *kurkulai*, G. *Rogen* 'eggs' (of a fish).

**perg-* 'pole, stalk, threshold'.

**pnkstī-s* 'fist': Russ. *pjast*, E. *fist*.

**rēp-* 'pole, beam': OBG *rēpū*, etc.

**(s)preng-*: Russ. *prjač, prjagu*, etc.

³⁸ See Birnbaum 1971: 235 ff.

³⁹ Brugmann 1884: "In diesem uridg. Sprachgebiet können z. B. die Vorfahren der bsl. Völker mit ... den Ahnen der Arier zusammen eine Anzahl von *k-* zu Zischlauten verschoben haben, und diese Verschiebung blieb auf einen Teil des uridg. Sprachgebiets beschränkt. Dann trat in diesem Gebietsteil eine Volksspaltung ein; die Urahnen der bsl. Stämme trennten sich gemeinsam mit ihren Nachbarn zur anderen Seite, den Vorfahren der Germanen, von den Ariern ab, und es begann nun die besondere Geschichte des bsl.-germ. Sprachstammes. Die Lituslaven behielten ihre gemeinsam mit den Ariern aus *k-* Lauten entwickelten Zischlaute bei."

⁴⁰ See also A. Scherer 1956; Stang 1971. Arntz (1933: 35-37) gives a list of related words in Balto-Slavic and Indo-Iranian: most of the words cited are not typical of these groups exclusively and do not correspond exactly. See also Burrow 1955: 20-21.

**(s)prong-*: Russ. *prug*, cf. LG *spranke* 'grasshopper'.

**(s)wol-wi-* 'nightingale, swallow'; Russ. *solovej*, E. *swallow*.

**wokso-s* 'wax': Lith. *vāškas*, OBG *voskü*, E. *wax*.

Verbs

**bhergh-* 'to keep': OBG *bręgo* 'to take care', East-Lith. *biřginti* 'to keep', Goth. *balrgan* 'to hide'.

**bhleyg-* 'to shine'.

**bhlendh-* 'to roam': OBG *blęsti*, *blędo*, *blędü*, Lith. *blendziuos*, *blista*, Goth. *blinds* 'blind'.

**d^helbh-* 'to cut out'.

**d^hrebh-* 'to break'.

**d^hreyd-* 'to have diarrhoea'.

**ghēyd^h-* 'to pine, to wish, to wait'.

**ghewb^(h)-* 'to fold, to twist'.

**ghrebh-* 'to ladle' and **ghrobho-s* 'ditch, grave'.

**ghreybh-* 'to catch, to take'.

**grews-* 'to squeak'.

**krewt-* 'to shake, to tear'.

**lew-* 'to let'.

**lewgh-* 'to lie', **lughya* 'a lie', and **lughⁱ-s* 'untrue, lying'.

**pol-*, **plō-* 'to burn, to warm' and **polmen-* 'flame'.

**skewbh-* 'to hurry, to throw, to whirl, to tear'.

**(s)kut-* 'to shake'.

**sleng-* 'to slide'.

**smel-* 'to burn low, to smother'.

woldhō* (weldhō*) 'to rule, to dominate'.

Adjectives

**bhlaydo-s*: OBG *blędü* = Anglo-Saxon *blāt* 'poor'.

**bhūsro-s* 'quick'.

**d^heb-* 'thick, strong'.

**galo-s* 'naked'.

**gleg-* 'dainty, spoiled'.

**koylo-s* 'whole, strong, healthy'.

**lās-* 'loose, weak, bad'.

**pr(o)is-ko-s* 'fresh'.

**rēdo-s* 'happy'.

**sūro-s* 'sour, salty, bitter'.

The lexical correspondences between Balto-Slavic and Germanic are not only numerous but often exact in terms of phonology, morphology, and word formation: this clearly shows the unity of the Balto-Slavic and Germanic culture and way of life.⁴¹

There is no doubt that certain correspondences exist between Slavic and Iranian, but they are fewer and are restricted mainly to religion (OBG

⁴¹ See also Meillet and Vaillant 1934: 511.

bogŭ, svarogŭ, svetŭ, etc.) which can be considered to be an Iranian influence on Slavic.⁴²

On the basis of these facts Lehr-Splawinski comes to the conclusion that "the Balto-Slavic language complex, and, to a greater degree the Proto-Slavic complex, had many important connections with the languages of the Germanic complex in their vocabulary and grammatical structure. These connections are superior in quality and quantity (contrary to the assumption of the old theory, especially the German theory) to the connections with Iranian".

Therefore, on the basis of these facts the following conclusions can be drawn:

(1) As compared to all the other IE languages groups, **Balto-Slavic is closest to Germanic.**

(2) With regard to the development of common IE we can suppose that a **North IE group** existed probably before the 3rd millennium B. C.: in the 3rd millennium it had already dissolved into Balto-Slavic and Germanic.

(3) Slavic also shows some aspects of a close relationship with Indo-Iranian but to a lesser degree as compared to Germanic. Furthermore, Germanic also has some elements in common with Italic and Celtic⁴³ but they are considerably less in number and importance than the elements in common with Balto-Slavic.

On the whole Balto-Slavic is closely related to Germanic but the existence of some features in common between it and Indo-Iranian cannot be denied. Keeping in mind the geographical position of the Balto-Slavs, with the Germanic tribes neighboring to the west and the Iranians to the southeast, this is very plausible.

⁴² Cf. Lehr-Splawinski 1955: 160; Pisani 1935: 150.

⁴³ See Porzig 1954a: 106-108.

Chapter 9

Tocharian and Balto-Slavic

9.1. Introduction

There are obvious typical elements in common between Tocharian¹ and Balto-Slavic, not only in the vocabulary and word formation but also in the morphology and phonology. The relation between Tocharian and Balto-Slavic was established when the first investigations of Tocharian were made. Thus, in establishing the position of Tocharian among the other languages in the IE family, Meillet stressed that it is in a position between Italo-Celtic, on the one hand, and Slavic and Armenian, on the other.

When the investigation of Tocharian started, a number of linguists (for instance Pedersen, Vendryes, Sommer, Walde, and Charpentier) were inclined to look for a connection with Italo-Celtic, or only with Celtic, on the basis of some verbal forms ending in *r*. Later, however, when the common IE origin of these verbal forms was proved due to the fact that they were not only typical of Italic, Celtic, and Tocharian but also of Phrygian, Hittite, and Indo-Iranian, the hypothesis of a close relationship between Italo-Celtic-Tocharian was abandoned.² This concept was severely criticized by Pokorný (1923: 23-25), who came to the conclusion that Tocharian was a Thracian (Thracio-Phrygian) dialect which was closely related to Armenian.³

The hypothesis of a closer relationship between Tocharian and Balto-Slavic appeared later. Kellogg (1927) proved that Tocharian was extremely close to Balto-Slavic and Germanic (and Thracio-Phrygian). Benveniste (1936) stressed that Tocharian was close to Balto-Slavic, on the one hand, and to Greek-Armenian-Thracio-Phrygian, on the other. According to Schwentner (1943: 33-34), Tocharian occupies a central position between Germanic and Balto-Slavic, as well as between Celtic and Thracio-Phrygian. Krause (1948-51: 199) put great emphasis on the existence of a relationship between Tocharian and Balto-Slavic. Porzig (1954a: 183-184) pointed out the important features in common between Tocharian and Balto-Slavic and suggested that the original home of Tocharian was the region which neighbors on the region of the Baltic, Slavic, and Germanic. The affinity between To-

¹ "Tocharian" is the conventionally accepted name for two closely related languages (A and B) in which records found in East Turkestan (western China) were written. Some scholars use the name of the region — "Turfanic" or "Kuchaic" or "East Tocharian" and "West Tocharian" — instead of the usual names "Tocharian A and B". On the relationship between these two languages see Lane 1966: 213-216.

² Schwentner 1935: 21-27.

³ See also Ivanov 1959: 36.

charian and Balto-Slavic was pointed out when it became clear that Tocharian was not closely related either to the western IE languages⁴ or to Indo-Iranian⁵ or to Hittite-Luwian.⁶ The main reason for connecting Tocharian with Italo-Celtic was the concept of the treatment of the IE gutturals in Tocharian from the point of view of the dominant *centum-satəm* theory.⁷ Since the velars were not assibilated in words such as Toch. A *okät*, B *ok(t)* 'eight', Toch. A *çäk*, B *çak* 'ten', Toch. A *känt*, B *kante* 'hundred', but were preserved, Tocharian was immediately classified into the so-called *centum* group (Celtic, Italic, Germanic, Greek, and Hittite-Luwian). But many other elements indicated a close relationship with Balto-Slavic and finally even the adherents of the *centum-satəm* theory had to accept this obvious fact.

The conclusion about the treatment of the IE gutturals in Tocharian was actually too hasty. It was predominantly based on aprioristic considerations formulated on the basis of the principles of the prevalent *centum-satəm* theory. The principle assumptions of this theory are the following: (a) IE languages are classified into two groups, *centum* and *satəm*: the languages belonging to the *centum* group are closer to each other than languages of the *satəm* group and *vice versa*; (b) the so-called IE palatals appear as velars (*k*) in the languages of the *centum* group while in the *satəm* group they appear as sibilants or affricates (cf. Slav. *s*, *z*, Skt. *ś*, *j*, *h*); in the *centum* group the labiovelars are preserved (*kʷ*), while in the *satəm* group they appear as velars (*k*). Taking these assumptions as a starting point, during the first period of the investigation of Tocharian the following conclusions were made: words such as Toch. A *okät*, B *ok(t)* 'eight', Toch. A *çäk*, B *çak* 'ten', Toch. A *känt*, B *kante* 'hundred' show that Tocharian was a *centum* language and consequently the IE labiovelars (*kʷ*) should have been preserved.

Today the *centum-satəm* theory does not have the status it had towards the end of the 19th century and the first decades of this century. Now the prevalent theory is that of the gradual assibilation of the velars into the separate IE languages due to the law of palatalization. Therefore, the aprioristic assumptions regarding Tocharian became untenable. The main points of our thesis are the following.⁸ During the late (final) period of development of common IE two guttural series existed: velars (*k*, *g*, *gʰ*) and labiovelars (*kʷ*, *gʷ*, *gʷʰ*). After some IE dialects had broken away (as, for instance, Balto-Slavic, Indo-Iranian, etc.) the original velars became palatalized independently of each other and at different periods in the separate dialect groups; later they shifted into affricates and still later into sibilants. The palatalization of original velars, i. e., the shift of the first member in the *k* — *kʷ* opposition, caused the delabialization of the labiovelars in the respective dialects. Thus due to palatalization the second member was also changed: the correlation *k* — *kʷ* shifted into *k'* — *k*. The assibilation of the velars in the so-called *satəm* languages, which is a very ordinary and widespread phonematic phenomenon, took place independently in the differ-

⁴ Cf. Porzig 1954a: 182.

⁵ Cf. Burrow 1955: 16.

⁶ Cf. Lane 1958: 253; Porzig 1954a: 183.

⁷ See Benveniste 1936: 229.

⁸ See section 2.1.

ent languages and cannot be considered to be evidence for close relationships.

Tocharian is a glaring example of the fact that the *centum-satəm* theory is erroneous. As we will see below, Tocharian shows a close relationship with Balto-Slavic not only in morphology and vocabulary but also in phonology and word formation.

9.2. The Treatment of the IE Labiovelars in Tocharian

According to the prevalent point of view, the IE labiovelars (k^w , etc.) were preserved in Tocharian insofar as they had not shifted into velars or sibilants for secondary reasons. This point of view is erroneous. The data from Tocharian comparative-historical phonology clearly show that the IE labiovelars (k^w , etc.) appear in this language as velars (k) or as sibilants (ζ) according to the law of palatalization. The treatment of the IE labiovelars in Tocharian is similar to their change in Slavic (IE $k^w >$ Slav. k or \check{c}).

A large number of examples with reliable or quite probable etymologies show that the IE labiovelars appear as velars (k) or sibilants (ζ) in Tocharian:⁹

Toch. A *ak*, B *ek* n. 'eye', cf. OBG *oko* 'eye' from **okwos* n.

Toch. A *ačäm*, B *eč(a)ne* dual. 'two eyes', cf. OBG *oči* dual. 'two eyes' with \check{c} from k^w before an i .

Toch. A *akmal* 'face, appearance' consisting of A *ak* 'eye' + **mal* 'nose'.

Toch. A *čo-*, *čā-*, B *čau-*, *čā-*, *čai-* 'to live' from **gwyōw-*, cf. Gr. *ζῆν* 'to live'.

Toch. A *čāñi*, B *čana* 'woman, wife' = OBG *žena* from **gwenā*.

Toch. A *čärme* 'heat', cf. Gr. *θερμός*, Arm. *jěrm* 'hot' from **gwhermo-*.

Toch. A *čtwar*, B *čtwer* 'four' from **kwetwer-es*; A *čtärt*, B *čtart(t)e* 'fourth' from **kwet(w)rt-*.

Toch. AB *käs* 'to extinguish': OBG *u-gasiti* 'to extinguish', Gr. *σβέννυμι* 'to extinguish' from **(s)gwes-*.

Toch. A *käts*, B *kätso* 'abdomen' from **gwdtyā-*, cf. Goth. *qīpus*, Olcel. *kviðr* n. 'abdomen', L. (Osc.-Umbr.) *botulus* 'intestines, salami' (?).

Toch. A *klā-*, *klāw-* (*klaw-*), B *klāy-* (*kloy-*) 'to fall', cf. Skt. *glāyati*, *glāti* 'feels exhausted, vanishes' from IE **gwl-*.

Toch. A *ko*, *ki*, B *keu* 'cow', cf. Gr. *βοῦς*, Skt. *gau-* 'cow, bull, ox'; Toch. B *kewiye*, cf. Skt. *gāva-* 'bovine'.

Toch. B *kor* 'throat', OBG *grūlo*, Lith. *gurkl̃s*, Arm. *kokord* 'throat', Skt. *girati* 'he swallows, eats' from IE **gwer-* (see below).

Toch. A *lāntse*, *lantse* 'light' from **l̥ngwh(u)-*, cf. Skt. *laghú-* 'quick, light', Av. *ragu-* 'quick, nimble' from **legwhu-* or **l̥ngwhu-*, Gr. *ελαχύς* 'small, short', *ελαφρός* 'light, nimble'.

Toch. A *lek* 'porro, ab' from **leykw-*, cf. L. *linquo* 'to leave', Gr. *λοιπός* 'left'.

Toch. A *lek-*, *lik-*, B *laik-*, *lik-* 'to wash', cf. L. *liqueo* 'to be liquid', *liquo* 'to melt, to drain', *liquor* 'liquid' from IE **leykw-*.

Toch. A *lykäly*, *lyäkly-*, B *lykačke* 'thin, fine', cf. Skt. *laghú-* 'quick, light' from **legwhu-*.

⁹ For the examples below see Van Windekens 1941 and 1976; Lane. 1960.

Toch. A *orkām*, B *orkamo* 'dark(ness)' from **ṛgʷmo-* or **ōrgʷmo-*, Toch. A *arkant-*, B *erkent* 'black', cf. Gr. *ἔσθρος* 'darkness', *ὀσφρός* 'gloomy', Goth. *riqis* 'darkness'.

Toch. A *pāñ*, B *piç* 'five', Toch. A *pānt*, B *piñkte* (*pinkce*, *pinçe*) 'fifth' from **penkʷe-*, **penkʷto-*.

Toch. A *pāk-*, *pak-*, *puk-* (?), B *pāk-*, *pek-* 'to boil, cook' from **pekʷ-*.

Toch. A *rake*, B *reki* 'word' = OBG *rēčl* 'word' from **rekʷi-s*.

Toch. A *sāk* 'to follow (?)' from **sekʷ-*, cf. L. *sequor*, Gr. *ἑπομαι* 'to follow'.

Toch. A *sek*, *sik-* 'to flood' from **seykʷ-*, cf. Skt. *secate* 'to pour'.

Toch. A *tsāk-*, *tsak-*, B *tsāk-*, *tsek-* 'to burn, glow' from **dʰegʷh-*, cf. Skt. *dāhati* 'burns'.

Toch. A *wak*, B *wek* 'voice' from **wokʷ-*, cf. Skt. *vāk* - L. *vōx*, Skt. *vākti* 'speaks', Gr. *ἔπος* 'word'. Derivatives: Toch. B *wesk-* 'to speak', pres. part. *wekʷeñca* from **wekʷ-sk-* > *wesk-* and **weks-*. Palatalization and assibilation: Toch. A *waçem*, B *weçeñña* 'voice'.

Toch. A *wāktasurñe* 'honor, reverence' from **wekʷ-*, cf. Skt. *vākti* 'speaks'.

The following conclusions can be drawn from these examples:

(a) IE labiovelars were delabialized in Tocharian: they appear as velars before a consonant or before IE *ǎ*, *ǝ*, *ũ*.

(b) The delabialized labiovelars were palatalized and assibilated before IE *ě*, *i*, and *y*.

Examples:

(a) at the beginning of the root: Toch. A *kāts*, B *kātso* 'abdomen'; Toch. AB *klā-* 'to fall'; Toch. A *ko*, *ki*, B *keu* 'cow'; Toch. B *kor* 'throat';

(b) at the end of the root: Toch. A *ak* (gen. *akis*), B *ek* 'eye'; Toch. A *lek-*, *lik-*, B *laik-*, *lik-* 'to wash'; Toch. AB *pāk-*, B *pek-* 'to cook'; Toch. A *sāk-* 'to follow'; Toch. A *sek-*, *sik-* 'to flood'; Toch. AB *tsāk-*, A *tsak-*, B *tsek* 'to burn, to glow'; Toch. A *wak*, B *wek* 'voice';

(c) before a consonant or IE *ǎ*, *ǝ*, *ũ*: Toch. A *akmal* 'face, appearance'; Toch. A *arkant-*, B *erkent-* 'black'; Toch. B *lañktse*, *lañtse* 'light'; Toch. A *lykäly*, B *lykaçke* 'thin, fine'; Toch. A *orkām*, B *orkamo* 'dark(ness)'; Toch. A *pānt*, B *piñkte* 'fifth'; Toch. A *wāktasurñe* 'honor, respect'.

(d) before IE *ě*, *i*, *y*: Toch. A *açam*, B *eç(a)ne* dual 'eyes'; Toch. B *çau*, *çā-*, *çai-* 'to live'; A *çam*, B *çana* 'woman, wife'; Toch. A *çarme* 'hot'; Toch. A *çtwar*, B *çtwer* 'four'; Toch. A *pāñ*, B *piç* 'five'; Toch. A *waçem*, B *weçeñña* 'voice'.

The fact that before IE *ě*, *i*, *y* the IE labiovelars in Tocharian appear as sibilants shows unequivocally that before being palatalized (and assibilated) they were delabialized. Examples of the type as Toch. A *çam*, B *çana* 'woman' from **gʷenā* show that this form changed in the following way: IE **gʷenā* > Proto-Toch. **genā* > **g'enā* > Toch. A *çam*, B *çana*, i. e., as in Slavic: IE **gʷenā* > Balto-Slavic **genā* > **g'enā* > OBG *žena*. If we assume that the development had taken place along the line of IE **gʷenā* > Proto-Toch. **gʷenā* > **gʷ'enā*, the dropping of the *w* cannot be explained since in such cases *w* is preserved, cf. Toch. B *twere* 'door' from **dʰ(w)oro-*, *çtwar* 'four' from **kʷetwe/or*, Toch. B *yakwe* (A *yuk*) 'horse' from **ekʷo-s*, Toch. A *svarp*, *sparp-* 'rope', Toch. AB *swās-* 'it rains', Toch. A *swase*, B *swese* 'rain', Toch. A *swār*, B *swäre* 'sweet, pleasant', Toch. A *twe*, B *tweye* 'dust' from **dʰw-*, Toch. A *pärwat*, B *pärwe* 'first', etc.¹⁰ These

¹⁰ The etymologies of Toch. B *çer-* 'to hunt', A *çaru*, B *çerwe* 'hunter' from IE **ghwēr-*, cf. Lith. *zvēris* 'beast', and Toch. B *çīncaccepi* 'covered by snow', cf. Skt. *śvin-date* 'is brilliant', show that IE *kʷ* had become in Proto-Tocharian *kʷ* and was treated as IE *kʷ*.

examples show that in the cluster 'consonant + *w* + IE *ě*, *ĩ* the consonants were not palatalized in Tocharian: otherwise we would expect **cwere*, etc., since *t* is palatalized before IE *ě*, *ĩ*.

Therefore, in Proto-Tocharian the IE labiovelars were delabialized. This is confirmed by the identical treatment of the labiovelars and the velars before IE *ě*, *ĩ*, cf. Toch. AB *çpāl* 'head' = Gr. *κεφαλή* 'head' and Toch. A *çtwar*, B *çtwer* 'four' = Gr. *τέσσαρες* 'four'.

9.3. IE Syllabic Liquids and Nasals in Tocharian

The erroneous conception about the treatment of the IE labiovelars in Tocharian, and especially the assumption that the labiovelars in Tocharian were preserved in the form *ku* or *k^w*, is due to conclusions (already mentioned) which were based on the *centum-satəm* theory, and to the erroneous explanation of the treatment of the IE syllabic liquids and nasals in Tocharian, to some erroneous interpretations of facts, and also to incorrect etymologies. Below we shall give some of the examples on which this theory is based and we shall try to offer a more plausible explanation.

(a) Let us analyze the following words:

Toch. A *kām-*, *kum-*, *çām-*, B *kām*, *çām-*, *çem-* 'to come' from **gwem-*.

Toch. B *kul-* 'bell', cf. Toch. AB *kāln-* 'to ring, jangle', OHG *hellan* 'to ring, sound'.

Toch. AB *kul-* 'to slow down, grow thin' from **g^w(e)l-*, cf. Skt. *glāyati*, *glāti* 'feels exhausted, vanishes'.

Toch. A *kuli*, B *kl(y)īye* 'woman' from **k^wliyē*, cf. Ir. *caile* 'woman, girl', *cailin* '(little) girl', Bret. *pl-ac'h* 'girl' from IE **k^wly-* (Pedersen 1941: 99-101).

Toch. AB *kulyp-* 'to wish' from **k^wel-*, cf. Av. (*aibi*-)*xrapa-* 'to take care of' from **k^wlep-*.

Toch. A *kuñaç* 'battle, struggle, fight' from **g^wh^y-*, cf. Gr. *θεῖνω* 'to strike', Skt. *hanti* 'he strikes, kills', OBG *gūnati* 'to drive away'.

The IE syllabic liquids and nasals appear in Balto-Slavic in two forms *ir*, *il*, *in*, *im* and *ur*, *ul*, *un*, *um*; *ur*, *ul*, *un*, *um* appear more often after gutturals.¹¹

A similar situation is found in Indo-Iranian. In Sanskrit the IE *r*, *l* before a vowel appear as *ir* and *ur*: *ur* usually appears after original labials or labiovelars,¹² while in Avestan the same IE phonemes appear in the form *ər* or *or* (in graphics *ōr*), usually after labials.¹³ Furthermore, Skt. *r* shifted in Middle Hindi in two ways: it appears as *a* and as *u* especially after labials, cf. Skt. *vrka-* 'wolf' > Middle Hindi *vaka-* but Skt. *prthu-* 'spacious' Middle Hindi *puṭhu-*. The same phenomenon is observed in Albanian and Armenian, especially after gutturals, cf. Alb. *për-kul* 'to fold, bend' from **k^wl-n-* and *qel* 'to carry' from **k^woleyō*, *sjell* 'to twirl, carry' from **k^wel-*, *kulp* 'forest (wild) vine' from **k^wl-b^h-* (root **k^wel-*).¹⁴

Thus in all of the so-called *satəm* languages in which the labiovelars are delabialized there are examples of *u* after an original labiovelar. How-

¹¹ Cf. Vaillant 1950: 171.

¹² Cf. Burrow 1955: 86.

¹³ Cf. Reichelt 1909: 58-61.

¹⁴ See Pokorny 1951-69: 639.

ever, this fact cannot be evidence for the preservation of the labial element of the IE labiovelars. The same applies to Tocharian.

The double treatment of the syllabic liquids and nasals is found in some of the other IE languages,¹⁵ especially in the so-called *satəm* languages; it is also typical of Tocharian: IE *l*, *l̥*, *n*, *n̥* appear in Tocharian not only in the forms *är*, *äl*, *än*, *äm* (or *a* instead of *ä*) but also in the forms *ur*, *ul*, *un*, *um* (usually after original labiovelars).

The shift of IE *n̥* > Toch. *um* is found in different forms and derivatives of the Tocharian verb Toch. A *käm-*, *kum-*, *čäm-*, B *käm-*, *čäm-*, *čem-* 'to come' from the IE root **g^{wh}em-*. In different IE languages this verb is recorded in three different vowel grades: **g^{wh}em-*, **g^{wh}om-*, and **g^{wh}n̥-*. The same is found in Tocharian. Toch. AB *čäm-*, B *čem-* are derived from IE **g^{wh}em-* (the assibilation shows that this is an IE *e*). Toch. AB *käm-* is derived from IE **g^{wh}om-*, while Toch. *kum-* is from IE **g^{wh}n̥-*; this can clearly be seen from the form Toch. A *kums-* pres. act. from **g^{wh}n̥-sk-* which corresponds exactly to Skt. *gacchati*, Av. *jasaiti* 'he goes', Gr. *πάσχω* 'to walk', Lith. *gimsta* 'to be born' from **g^{wh}n̥-sk-*.

The shift of IE *n̥* > Toch. *un* appears in Toch. A *kuṇač* 'battle, struggle, fight' which derives from **g^{wh}n̥-tyo-* or **g^{wh}n̥-ti-* > **kunč* (with anaptyctic *a*) and corresponds to Skt. *hati-h* 'battle, fight, blow', Av. *-jaiti-* 'fighting', Old Norse *gudr*, *gunar* f. 'battle, fight', Lith. *giñčas* 'controversy, row, fight', OBG *gūnati* 'to drive away'. The exact correspondence in the treatment of the IE syllabic nasal in Tocharian and Balto-Slavic is especially significant in this case. As was already pointed out, the IE syllabic liquids and nasals appear in Balto-Slavic in the forms *ir*, *il*, *in*, *im*, but after original labiovelars they usually appear as *ur*, *ul*, *un*, *um*. In Lith. *gunióti*, *gūnyti* 'to drive away', Old Pruss. *gunimai* 1st pers. pl. pres. '(we) drive away', *guntwei* inf., OBG *gūnati* 'to drive away' from Balto-Slav. **gun-* < IE **g^{wh}n̥-* appears in Balt. *-un-* > Proto-Slav. *-ŭn-* from IE *n̥* as in the Tocharian correspondence *kuṇač* < IE **g^{wh}n̥-*. The supposition of Van Windekens (1979: 54) A *kuṇač* < IE **g^{wh}n̥-enti* is not plausible.

A similar phenomenon is found in Toch. B *kor* 'throat'. In Toch. B the IE vowel *u* often appears as *o*, cf. Toch. A *kukäl* = B *kokale* 'cart', Gr. *κύκλος* 'circle, wheel'; Toch. B *okso* 'beast, cattle', Skt. *ukṣán-* 'bull'; Toch. B *kor-*, A *kur-* 'to weaken, grow old'; Toch. B *aurtse* 'spacious', cf. Skt. *urú-* 'spacious'. Thus Toch. B *kor* 'throat' is derived from an older **gur(dl?)-* and corresponds to Lith. *gurklė*, OBG *grūlo* from Balto-Slav. **gurdl(a)-* < IE **g^{wh}r-d^hl(o)-*.

In Balto-Slavic words the vowel *u* appears after an original labiovelar but this cannot be evidence for the preservation of the labiovelar or of its labial element. The same *-ur-* appears in Old Pruss. *gurcle* 'pharynx' and Arm. *kur*. Actually these words show the double treatment we have already discussed: cf. Lith. *girtas* 'drunk' from Balto-Slav. **gir-*, OBG *žirati* 'to swallow' = Skt. *girāti* (and *grñāti*) 'he swallows' < IE **g^{wh}r-* which is derived from the root already discussed.

The Tocharian word AB *kur-*, B *kwr-* 'to weaken, grow old' is proof for the correctness of this explanation of the specific treatment of the orig-

¹⁵ A similar double treatment of the sonant liquids is seen in Hittite: IE *r* > Hitt. *ar* but also *ur*, see Szemerényi 1955: 171-172.

inal labiovelars and of the syllabic liquids and nasals. This word is related to Skt. *jāratī*, *jūryati*, *jīryati* 'grows old', *jarant-* 'old', Gr. *γέρον* 'old', Arm. *cer* 'old'. The Tocharian verb Toch. AB *kur-*, B *kwr-* corresponds exactly in meaning and in formation to the Skt. *jūryati*, *jīryati*: it is derived from PIE **gʰh-*. What we have here is not an original labiovelar but a velar. This example shows that in Tocharian *ur* (B *wr*) is derived from IE *ɣ*. Furthermore, Toch. B *kul-* 'bell' is derived from IE **kʷl-* (and not from **gʰew-*: Van Windekens 1976: 243): it is related to Toch. AB *kālñ* 'to ring, sound', Russ. *kolokol* 'bell' from IE **kol-kolo-s*, Gr. *καλέω* 'to call, ask' (< IE **kʷl-*), OHG *hellan* 'to ring, sound'.

A similar shift is found in Toch. A *kursär* (nom. acc. pl. *kurtsru*), B *kursar*, *kwärtsar* 'mile, measure for length' which Van Windekens correctly derives from IE **kers-* 'to rum'.¹⁶ Toch. A *kursär* corresponds to L. *cursus* 'road, run, voyage' from IE **kʷrs-*; the semantic development was the following: '(one) road, (one) voyage' > 'one traversing' > 'a (measure for) length'. We have an IE velar and not a labiovelar in this case as well.

Thus the vowel *u* in the Tocharian forms A *kum-*, AB *kulyp-*, A *kuñaç*, etc., cannot be considered to be evidence of the preservation of a labiovelar. The situation is the same in Lith. *kūrti* 'to build, make', Skt. *kuru* (2nd pers. sing. imperat.) 'build, make', *kuryāt* (3rd pers. sing. pres. opt.) 'let (him) make', *kurmāḥ* (1st pers. pl. pres. ind.) '(we) make' beside *karōti* (3rd pers. sing. pres. ind.) '(he) makes', *karā-ḥ* 'making' from IE **kʷoró-s*, etc., which are derived from IE **kʷer-* 'to make'. As in the Lithuanian and Sanskrit verbal forms mentioned above, *ku(r)-* does not show any preservation of the labiovelar but *ur-* is the shift of the IE syllabic liquid, so *ku-* in the Tocharian forms cited cannot be considered to be evidence for the preservation of an original labiovelar: on the whole *ur*, *ul*, *un*, *um* are only the corresponding shifts of IE syllabic liquids and nasals.

(b) The explanation for the vowel *u* in Toch. B *käry-* 'to trade', Toch. A *kuryar*, B *karyor* 'trade', Toch. A *kuryart*, B *käryorttan* 'merchant', cf. Skt. *kriṇāti* '(he) buys', Gr. *πράττω* 'to buy', is that the root from which these words are derived is **kʷrey-* and the vowels *-u-*, *-ä-* (*a-*) in Toch. A *kury-*, B *käry-*, *kary-* are epenthetic.¹⁷ Epenthetic vowels (usually *ä*, *a*) between consonants are quite usual in Tocharian, cf. Toch. A *tre*, *täryāpi*, B *trey*, *trai(y)-*, *tärya*, *tarya* 'three' from **tr-*, Toch. A *klyu-*, (ñom) *kälywäts* 'elevated', Toch. B *kälywe* 'glory' = Gr. *κλέος* 'glory' from **klew-*, Toch. A *kukäl*, B *kokale* 'cart' = Gr. *κύκλος* 'circle, wheel', Toch. A *ākär* 'tear' = Skt. *āśru-* 'tear', Toch. B *okt* = A *okät* 'eight', etc.¹⁸ Pedersen (1941: 225) determines *ä* in *käry-* as an epenthetic vowel. Thus Toch. A *kury-*, B *käry-*, *kary-* is derived from **kʷr(i)y-* in which *ä* (*a*) and *u* are epenthetic vowels in the cluster *kr*.

(c) Toch. A *kukäl*, acc. pl. *kuklas*, B *kokale*, acc. pl. *koklem* 'cart', cf. Gr. *κύκλος*, Skt. *cakrā-*, *wheel*, Phryg. *κύκλῃ* '[cart] > Ursa Major (constellation)', Lith. *kāklas* 'neck'. As is clear from Phryg. *κύκλῃ* and Lith. *kāklas*, the vowels *e*, *o*, *u*, *i* in these words are not derived from the original labiovelar but are typical of each language in the reduplicated syllable. Since

¹⁶ Cf. Van Windekens 1941: 49; 1976: 245.

¹⁷ Schindler 1968: 240: "A *kuryar* ... *u* durch Labialumlaut aus *ä*."

¹⁸ For these epenthetic vowels in Tocharian see Pedersen 1941: 224-226; Couvreur 1947: 79.

in some cases the IE vowel *o* is preserved in Tocharian (cf. Toch. A *okāt*, B *okt* 'eight' from **oktō*), it can be assumed that Toch. A *kukal*, B *kokale* are derived from **k^wok^wlo-s*; thus they are similar in formation to Lith. *kāklas*. However, *-v-* in Gr. *κόκλος* does not represent an original labiovelar but the vowel in a reduplicated syllable.¹⁹

(d) The Tocharian interrogative-relative pronoun is Toch. A *kus*, B *kuse* m. f. 'who', Toch. A *kuc*, B *kuce* n. 'what', the indefinite pronoun is Toch. AB *kos-* 'someone'; Toch. A *ku-pre*, B *k^wri*, *krui* 'if, when', *k(u)yal* 'because', *k(u)yalte*, *kuyolte* 'since' are also from the same root. The vowel *u* (*o*) cannot be derived from the second element of the IE labiovelar because the original form **k^w + consonant* is impossible. Van Windekens correctly derives these forms from **k^wu-*,²⁰ cf. Ved. *kū-*, Av. *kū*, OBG *kūde* 'where' from **k^wu-d^he*, Alb. *kur* 'when', etc. The Tocharian pronoun has an exact correspondence in Albanian and Balto-Slavic in this respect, cf. the interrogative pronoun Alb. *kush* m. f. 'who' from **k^wu-*, Lith. dial. *kū* 'what' and OBG *kū-to* 'who' from **k^wu-* + particle *-to*. The consonant *-sh* in Alb. *ku-sh* probably has the same origin as *-s(e)* in Toch. A *ku-s*, B *ku-se*, while the final element in OBG *kū-to*, *čī-to* is probably related to *-c(e)* in the Tocharian pronoun A *ku-c*, B *ku-ce*.

(e) There are some false etymologies and interpretations.

Toch. B *çerk(we)* 'ashes' is compared to Gr. *τέφρα* 'ashes' from **d^heg^{wh}rā*. But the phonetic differences remain unexplained. The Tocharian word must be derived from **g^{wh}ēr(u)k-*,²¹ cf. OBG *žariükü* 'hot, burning' from **g^{wh}ēr^u-ko-*, Bulg. *žarava* 'live coals' from **g^{wh}ērā-wā-*: *-we* in Toch. B *çerk(we)* is a suffix as in Bulg. *žarava*, cf. Toch. A *yetwe* f. 'decoration' from *yät-*, *yat-* 'to decorate', *çanwe* f. 'jaw', Toch. A *arki*, B *arkwi* 'white' and Hitt. *harki-* 'white', etc.²² Toch. B *çerk(we)* is not to be found in Van Windekens 1976.

Toch. A *kupār* 'deep' corresponds to Av. *gufra* 'deep, secret' and not to Gr. *βάπτω* 'to sink'. The ending of Toch. *kupār* 'deep' corresponds to *mārtar* 'long', *tpār* 'high'. The comparison of the Toch. A *kupār* with Gr. *βάπτω* is given in Van Windekens' dictionary but later it was abandoned.²³

Toch. A *nātsu-* 'to starve', which was compared with the Gr. *νήφω* 'to fast, to be hungry',²⁴ comes from PIE **n-hdt-* (Van Windekens 1976: 316) and has the suffix *-w-*, which is typical of the formation of a category of Tocharian verbs.

Toch. A *onk*, B *enkwe* 'man, person': the old comparison with Gr. *ἀδὴν* 'gland', L. *inguen* 'swelling, genitals' (Van Windekens 1941: 44) is improbable. Pedersen (1941: 235) connects the Tocharian word with Hitt. *antuhhas* 'man' (?). It comes from **p^kwo-s* (Van Windekens 1976: 337).

Toch. A *pukäl*, *pukul*, *pkul*, *pukl*, B *pikul* 'year' from **pek^w-* 'to bake' could have the suffix *-lo-*, *-ulo-*, *-ālo-*, etc., but not a preserved labiovelar. Van Windekens (1976: 396): **pek^wul-*.

¹⁹ But Gr. *κόκλος* and Toch. A *kukal*, B *kokale* can be explained through the dissimilation *l-l > o-l* from **k^wl^kwo-lo-s > *ka(l)klo-s*.

²⁰ Cf. Van Windekens 1944: 197-199; 1976: 246.

²¹ Or should it be considered to be a contamination of **d^heg^{wh}-ra* and **g^{wh}ēr(u)k-*?

²² Pedersen believes that 'the cluster *kw* often found in Toch. B is etymologically derived from two sounds' (1941: 235).

²³ Cf. Van Windekens 1941: 48; 1949: 148; 1976: 243.

²⁴ Cf. Van Windekens 1944: 44, 1976: 225-227.

Toch. A *suk*, B *sakw*, *sak* 'happiness', Toch. A *skassu*, B *skwassu* 'happy', Toch. A *sukaši* possessive adjective 'felicitatis'. Van Windekens' (1941: 113) etymology,²⁵ according to which this word is derived from the root **sek^w* 'to follow', is untenable. Pisani (1941-42: 2) interprets the Tocharian word correctly: he connects it with Skt. *sukhā-* 'happiness'. Toch. B *sakw* has the same suffix as Toch. A *yet-we*, etc.

The only example that can be considered to be evidence for IE *k^w* > Toch. B *kw* is Toch. B *walkwe* 'wolf' from **wlk^wo-s*, but the same *w* also appears in Toch. B *ärkwī-* (A *ärki*) 'white' with *kw* from IE *g*, cf. Hitt. *harki-* 'white', Gr. *ἀγρός* 'white, brilliant' from PIE **herg-*. Thus *w* in this case is of secondary origin, as, for instance, in Toch. B *kwärsar* (Toch. A *kursär*, B *kursar*) from IE **kers-* (see above), Toch. B *kwāñcit* together with *kuñcit* 'sesam' = Sacian *kumjsata*.²⁶ Cf. Krause and Thomas 1960: 64: "Toch. *k* seemingly shows an inclination to labiovelar pronunciation, so that the Tocharian clusters *kw* and *ku*... cannot be regarded as an indication of an original labiovelar." A similar labialization of *k* appears in Old Prussian, cf. *griquan* = *grecon*, *grecun*, *perronisquan* = *perroniscon*, *kristianisquan* = *krixtilianskun*, etc.

Therefore, there are no reliable examples to verify the preservation of the IE labiovelars in the form *ku* and *kw* in Tocharian. On the contrary, numerous and clear correspondences show that the IE labiovelars were delabialized in Tocharian. This corresponds exactly to the following phonological law: the correlation velar—labiovelar is preserved in the IE languages in which the velars were not palatalized (*k*—*k^w* opposition); but in the languages in which the majority of the velars were palatalized (and later turned into affricates or sibilants) the IE labiovelars which are unstable phonemes became delabialized (*k'*—*k* opposition). Therefore the treatment of the gutturals in Tocharian coincides with the treatment of the gutturals in French, see section 2.6.

On the basis of the material examined the following conclusions can be made.

(a) The IE labiovelars were delabialized in Proto-Tocharian, i. e., they shifted into velars as in Balto-Slavic and Indo-Iranian.

(b) At some stage in the preliterate period the Proto-Tocharian velars (which were derived from IE labiovelars) were palatalized (and afterwards assimilated before the vowels *ē*, *ī* or before an *y*; this process took place in the same way as in Proto-Slavic, Lettish, and Indo-Iranian.

(c) The IE syllabic liquids and nasals are represented by *är*, *äl*, *än*, *äm* (*ar*, etc.) in Tocharian, but after original labiovelars and velars they often appear as *ur*, *ul*, *un*, *um*. This double treatment corresponds exactly to the same phenomenon in Balto-Slavic and in part in Indo-Iranian.

All these facts lead to the following conclusion:

The change of the IE labiovelars in Tocharian is the same as the change of the labiovelars in the so-called *satəm* languages; it is fundamentally different from the treatment of the labiovelars in the so-called *centum* languages.

²⁵ Cf. also 1976: 444.

²⁶ The noun ending *-we* appears very often in Toch. B, e. g.: *yakwe* 'horse', *enkwe* 'man, person', *čerwe* (A *čaru*) 'hunter', *ketwe* 'decoration', *kretswe* 'rag, tatter', *plewe* 'ship', *śaswe* 'lord, master', *yatwe* 'whip', *yetwe* 'decoration'.

9.4. The Treatment of the Velars (the So-Called Palatals) in Tocharian

There are different opinions about the nature of the IE gutturals: some scholars divide them into three series: palatals, plain (pure) velars, and labiovelars, others into two series, i. e.: (1) prepalatals and postpalatals-labiovelars; or (2) velars, some of which were palatalized according to the law of palatalization, and labiovelars. From the point of view of the last conception, the shift of the IE velars in Tocharian is similar to the shift in Balto-Slavic, Indo-Iranian, and, on the whole, in all the so-called *satəm* languages.

(a) The IE velars were preserved in Tocharian before a consonant and before the IE vowels *ä*, *ö*, *ü*.

Toch. A *okät*, B *ok(t)* 'eight' from **okto*, cf. Alb. *tetë* 'eight' from **oktō-t-* and Arm. *utē* 'eight' from **oktō* with the assimilation *kt* > *tt* > *t*. The sibilant in Skt. *aṣṭā(u)*, Av. *ašta*, Lith. *aštuoni*, OBG *osmī* 'eight' appeared under the influence of forms such as Ved. *aśīti* 'eighty' (unification of the split root) where the velar is regularly palatalized and assibilated before the vowel *i* (see section 2.4.3).

Toch. A *čāk*, B *čak* 'ten' from **dekṃ*, cf. Alb. *dhjetë* 'ten' from **dek-t-* < **deka-t-* (see section 2.4.2), see *kānt*.

Toch. A *kānt*, B *kante* 'hundred': the velar was preserved since the IE syllabic *ṃ* (and *ṇ*) shifted into *a* (*ā*) + *n* in Proto-Tocharian. But in Balto-Slavic the velar was correctly palatalized and assibilated because the syllabic nasal shifted into *im*, cf. Lith. *šimtas* 'hundred'. Similar phonematic changes took place in Indo-Iranian (and in Proto-Armenian): IE *ṃ* > Proto-Indo-Iranian *ḡ* > Indo-Iranian *a* as in Slovak, High Lausitian, Russian, Ukrainian, and Belo-Russian, cf. Slovak *desať*, High Laus. *džesať*, Russ. *desjať* (= *des'at'*) from Proto-Slav. **dešetl* < Balto-Slavic **dešin-ti-* < IE **dekṃ-ti-*.

Toch. AB *käly-* 'to stand, to be' (cf. Skt. *śrayate* 'he leans, is found'): in this example *ä* is an epenthetic vowel, the velar was preserved regularly before a consonant.

Toch. A *yuk*, B *yakwe* 'horse', cf. L. *equus* 'horse' from **ekwo-s*: the velar was preserved in Tocharian before **w(o)-*; see section 2.3.

(b) In Proto-Tocharian the IE velars were palatalized and afterwards assibilated before the IE vowels *ē*, *ī* and before an *y*.

Toch. *ñiṭar* 3rd pers. sing. opt. med.-pass. from *nāk-* 'to perish', cf. Skt. *nāṣati* '(he) perishes' from **neketi* with sibilant before the vowel *e* but Skt. *pra-ṇak* aor. from **-nekst* with the velar preserved before an *s*.

Toch. A *čanw-* f. 'jaw', Skt. *hānu-* 'jaw', Gr. *γένυς* 'beard' from PIE **g'enu-*.

Toch. A *tsar*, B *šar* 'hand', cf. Arm. *jērn*, Gr. *χείρ* 'hand' from **ghe(s)r-*.

Toch. B *miço* (acc. sing.) 'urine' from **m(e)igh-yā* (Van Windekens 1976: 298), cf. Skt. *mēhati* '(he) urinates' from **meygheti*.

Unlike Balto-Slavic and Indo-Iranian, in Tocharian the process of unification of the split root was weaker. For this reason one finds velars (instead of sibilants from IE velars) more often in Tocharian than in Balto-Slavic or Indo-Iranian.

The treatment of the IE cluster *kle* in Tocharian reveals the prototype of the development in Balto-Slavic and Indo-Iranian. Words such as Toch. A *klyos-*, B *klyaus-* 'to listen' with *ly=l'* from **klews-* make it possible to conclude that in some IE languages the consonant preceding the vowel in a

cluster of the type *k**le* was palatalized, after which this palatalized consonant palatalized the preceding consonant: *k**le* > *k*'*le* > *k*'*l'e* > *č*'*l'e* > Slav. *sle*, Skt. *śra*, see section 2.4.1.

Thus the treatment of the IE velars (the so-called palatals) in Tocharian is almost the same as in Balto-Slavic.

9.5. Common Phonological Features of Tocharian and Balto-Slavic

(1) In Tocharian there was palatalization of the IE consonants before *ě*, *i*, *y* (*k* > *č*, *t* > *c*, *n* > *ň*, *l* > *ly*, *s* > *š*, *p* > *py*, *m* > *my*, etc.) which is similar to the palatalization in Balto-Slavic. In the Balto-Slavic languages the same consonants (*k*, *t*, *n*, *l*, *s*, *p*, *m*, etc.) before the vowels *ě*, *i* appear in the following form: in Lith. *k'* (Lett. *c*), *t'*, *n'*, *l'*, etc., in Slav. *č* (or *c*), *t'* (Pol., High Laus., Belo-Russ. *č* > Low Laus. *ś*), *l'*, *s'*, *p'*, *m'*, etc.²⁷, cf., for instance, the ending of the infinitive: Russ. *-t'*, Belo-Russ. *-č*, Pol. *-ć*, and Toch. *-tsi*; Russ. *desjat'*, Belo-Russ. *dzesjac'*, Pol. *dziesięć*, High Laus. *džesać*, Low Laus. *žesaś* 'ten', and Toch. A *cäk*, B *čak* 'ten' from **dekṃ*.

This palatalization took place quite early in Tocharian. During the 3rd century B. C. the word *mjēt* 'honey' is recorded in Chinese texts; it was probably borrowed from Toch. **myät* (> B *mīt* 'honey'). This shows that the palatalization of *m* > *m'* took place during the 3rd century B. C.: **med^h-* > **m'ed* > **m'ät* = **myät*.

The relative chronology of palatalization and the fusion of the stops in Tocharian are analyzed by Evangelisti (1950). As Evangelisti points out, the palatalization of the dentals preceded the merging of the unvoiced and the voiced stops since the result of the palatalization of the unvoiced and voiced stops is different. Thus it follows that the fusion of the three series of stops in Tocharian is a late phenomenon, while Tocharian palatalization is one of the most ancient processes which the two Tocharian languages have in common. Ivanov (1959: 10-11) writes: "This fact offers a basis for the comparison of the palatalization in the Tocharian languages with the similar process in Baltic and Slavic."

(2) In Tocharian and in Balto-Slavic the IE labiovelars were delabialized and afterwards palatalized before *ě*, *i*, (*y*). They are still preserved in Lithuanian, cf. Lith. *k'e*, *k'i*, *g'e*, *g'i*. In Tocharian, Slavic, and Lettish the palatalized velars shifted into affricates or sibilants at different times.

(3) The double treatment of the IE syllabic liquids and nasals in Tocharian (*är*, *äl*, *än*, *äm* and *ur*, *ul*, *un*, *um*) took place under the same conditions as in Balto-Slavic (and in part in Indo-Iranian).

(4) The fate of the Tocharian vowel *ä*, which often drops out in an open syllable, is very similar to the fate of the typical Slavic vowels *i* and *ü*.²⁸

(5) The IE diphthong *ew* shifted into *yu* in Tocharian as did in Balto-Slavic *ju*, Lith. *iau*, cf. Toch. B *lyūke* m. 'light, glow' = Gr. *λευκός* 'brilliant, white', like OBG *ljudū* 'people', Lith. *liāudis* 'people' from IE *lew^{dh}-*.

²⁷ Cf. Vaillant 1950: 45, 46.

²⁸ Krause 1955: 11-13.

9.6. Common Morphological and Word-Forming Features of Tocharian and Balto-Slavic

Morphology is the most stable part of a language: it changes very slowly and morphemes are difficult to borrow. For this reason the study of morphemes is extremely important in analyzing the relationship between languages. One finds features in common between Tocharian morphology and Balto-Slavic morphology, especially some innovations in common. This fact shows that after the disintegration of common IE, Tocharian and Balto-Slavic belonged to the same group, or at least were two closely related dialects, for a period of time. The typical elements of morphology and word formation which Tocharian and Balto-Slavic have in common are as follows.

(1) The ending of the infinitive Lith. *-ti*, Slav. *-ti*, Toch. *-tsi* from *-tēy* appears only in Balto-Slavic and in Tocharian.²⁹ The infinitive Toch. AB. *ṣwā-tsi* 'to eat' from **gyuw-ā-tēy* corresponds exactly to OBG *živ-a-ti*, Russ. *ževat* 'to munch' from **gyuw-ā-tēy*, cf. 1st pers. sing. pres. Slav. (Russ.) *žužu* < IE **gyew-yō* (root **gyew-*).

(2) The Tocharian preterite in *-ā* corresponds exactly to the Lithuanian preterite in *-o* and the Slavic in *-a*, for instance, Toch. B. *takāwa* '(I) was', *takāsta* '(thou) was', *tāka* (*takā-ne*) '(he) was', Lith. *buvaū*, *būvai*, *būvo*.³⁰

(3) The ending for the pres. act. part. (and *nomen agentis*) Toch. B. *-ñca* from *-nty-* is the same as the ending for the pres. act. part. in Balto-Slavic and Germanic: OBG *-nšt-*, Lith. *-nč-*, G. *-ndj-*, cf. Toch. B. *ṣwāñca* 'eating' = ORuss. (OBG) *žužuščii* 'munching' from **gyuw-ā-nty-*.

(4) The gerundives in *-(ā)l* correspond to the Slavic past active participle in *-lū*. Similar verbal forms are found in Armenian as well.

(5) Verbs formed by the suffix *-w-* are typical of Tocharian. These formations have exact correspondences in Slavic.³¹ Cf. Toch. A *pānw-*, B *pānn-(nw > nn)* 'to stretch, pull' from **pṛw-* and Bulg. *opūvam* from **pṛw-* beside *opūna*, OBG *pinq*, *peṭi* 'to stretch', Lith. *pinū*, *pinti* 'to braid'; Toch. AB *rāsw-*, B *rāss-* (*ss > sw*) 'to uproot'.

(6) Verbs formed by the suffix *-tk-* are also typical of Tocharian. They consist of the formant *-k-* and the final consonant *-t-* of some verbs.³² Similar formations appear in the Slavic languages, cf. Bulg. *svjatkam* 'to flash' from *svetja* 'to shine, to glow', *svirkam* 'to whistle' from *svirja* 'to play, to whistle', *perkam* 'to flap' beside *perna* 'to flap', *vaikam se* 'to wail' from *vai* (interjection expressing pain, sorrow, pity), etc.

(7) In Tocharian the prefix *p(ā)-* is used to form the imperative, cf. Toch. A *pā-klyos*, B *pā-klyaus* imperat. act. 2nd pers. sing., Toch. A *pā-klyossū* imperat. 3rd pers. sing., *pā-klyošās*, B *pā-klyaušso* imperat. 2nd pers. pl. of Toch. A *klyos-*, B *klyaus-* 'to hear, to listen' from **klerws-*. This prefix is the same as in Balto-Slavic Lith. *pa-*, Slav. *po-*. In Slavic this

²⁹ Cf. Pedersen 1941: 217; Couvreur 1947: 78; Krause 1948-51: 199; Krause and Thomas 1952: 111.

³⁰ Cf. Krause 1948-51: 199; 1955: 34.

³¹ Cf. OBG *bivati* from *byti*, (*po*)*kryvati* from (*po*)*kryti*, (*o*)*myvati* from (*o*)*myti*, *pokyvati* and (*na*)*kynati*, *naševati* from *naše(ja)ti*, *počivati* from *počiti*, *pomavati* and *pomajati*, *kupovati* from *kupiti*, *darovati* from *darū*, *imenovati* from *ime*, etc.

³² Cf. Sieg, Siegling, and Schulze 1931: 1; Van Windekens 1944: 226-228; Lane 1965: *t + k* "denominative origin".

prefix lost its etymological value completely and is used exclusively for marking verbs in the perfect aspect.³³ Of special significance is the coincidence of Toch. A *klyos-*, B *klyaus* < IE **klews-* = OBG *slušati*, Bulg. *slušam* < IE **klews-* 'to listen' and Toch. A *pä-klyos*, B *pä-klyaus* = OBG *po-slušai*, Bulg. *po-slušaj* imperat. perf. 2nd pers. sing. from IE **po-klews*.³⁴ Cf. also Toch. A *ske-* (*skāy-*), B *skai-*, *skāy-*, *škai-* 'molestiam suscipere, operam dare', imperat. act. pl. *pä-skāyās* which corresponds to Skt. *sagh-no-ti* '(he) takes on oneself; suffers', OBG *segnōti*, Bulg. *po-segna*, *po-sjagam*; Toch. A *tā-*, *tās-*, *tas-*, B *tes-*, *tās-* 'to put, to lay' imperat. act. Toch. A *ptas-*, B *ptes-* from IE **dʰē-*, cf. OBG *dē-ti*, *dējo* 'to put, to lay', Skt. *dādḥāti* '(he) puts, lays', Gr. *τίθημι* 'to put, to lay'.

Originally this prefix was used in Tocharian and Slavic to form verbs of the perfect aspect but later in Tocharian³⁴ it became the standard indication for the imperative.

(8) The Tocharian suffix for abstract (verbal) nouns Toch. A *-ne*, *-une*, B *-(āñ)ñe*, has exact correspondences in Balto-Slavic, cf. Toch. A *lāntune* 'kingdom' from *lānt* acc. 'king', *ākntsune* 'ignorance' from *āknats* 'ignorant', Toch. A *waçem*, B *weçeñña* 'voice, speech' from Toch. B *wek-* 'speak' and OBG *čitenije*, Bulg. *četine*, Bulg. *peene*, *igrane* from *četa* 'to read', *peja* 'to sing', *igraja* 'to play', Lith. *-(u)nė* = Slav. *-ynja* from IE *-unyə*, *-ā*.³⁵ Toch. A *šapn-* 'sleep' is derived from IE **s(w)epno-s* and corresponds to OBG *sūnū* 'sleep' but Toch. A *špām*, B *spane* 'sleep, sleeping' corresponds to OBG *sūpanije* > Bulg. *spane* 'sleep, sleeping' from IE **sup-ān-(i)yo-m*.

(9) The suffix Toch. A *-ši*, B *-sse* from *-skiyo-* is used to form (possessive) adjectives and corresponds to the Armenian suffix *-(a)ci* from *-askiyo-*, OBG *-iskū*, Lith. *-iškas* and Goth. *-iska-*, cf. Toch. A *çna-ši* 'wifely, womanly' from *çām* 'woman, wife', OBG *ženiskū* 'womanly' from *žena* 'woman', B *pelaikne-šše* 'lawful' from Toch. *pelaikne* 'law', Arm. *givolaci* 'peasant' from *givol* 'village'.³⁶

The situation is the same with the suffix Toch. A *-em*, Toch. B *-ññe*³⁷ which corresponds to the Slavic suffix *-inū*, *-inü*, cf. OBG *gospodīnū* from *gospodī*, *vojevodinū* from *vojevoda*, etc.

(10) Ivanov (1959: 58-59) has established that the diminutive suffixes Toch. B *-çke* from IE *-k-īko-* and *-çka* from IE *-k-īkā*^{38a} correspond exactly to the Slavic suffix *-č-ikū*, *-č-ikü* (IE *-k-īko-*) and *-č-ika*, *-č-ika* (IE *-k-īkā*), cf. Toch. B *soṃçke* 'small son', *sāsūçkam* 'small children', *šerçkā* 'small sister' from *šer* 'sister', the personal name *Lariçka* f. from *lare* 'love', and the Russian names *stnoček* 'small son' (< **sūnu-k-īko-s*), *sestrička* (< **s(w)esr-ī-k-īkā*), *mal'čik*, *stu'čik*, the personal names *Ljub-očka*, *Ver-očka*, *Son-ečka*, etc.

The Tocharian diminutive suffix Toch. A *-äly-* corresponds exactly to the Baltic diminutive suffix *-elis* (Lith. *-elis*, *-elė*).

³³ OBG *slušati* and *po-slušati*.

³⁴ Cf. Benveniste 1936: 2, 232.

³⁵ See Van Windekens 1944: 81-83; Couvreur 1947: 84-85; Porzig 1954a: 183.

³⁶ Cf. Sieg, Siegling, and Schulze 1941: 41 (in Tocharian as in the Slavic languages, belonging is usually expressed by a possessive adjective); Porzig 1954a: 186; Grošelj 1955.

^{38a} Otherwise Van Windekens 1979: 89-92.

³⁷ Cf. Krause 1955: 19, 34.

9.7. The Lexical Similarity between Tocharian and Balto-Slavic

The Tocharian vocabulary has not yet been sufficiently investigated from the etymological point of view. It should be kept in mind that Tocharian underwent considerable changes in phonology and its phonematic laws are not well established. For this reason at the present time only a small number of Tocharian words have a reliable etymology. Nonetheless there are many words in Tocharian which have correspondences in Balto-Slavic. In the list given below not only the words which have exact correspondences in Tocharian and Balto-Slavic were collected, but also the words which have correspondences in other IE languages, but that are closer to Slavic or Baltic words in formation or meaning.³⁸

Toch. B *akart(t)e* 'near, close to': Lith. *gretaĩ, gretà* 'close to' (Van Windekens 1976: 141 and 616).

Toch. A *ale* 'palm (of the hand)': Lith. *dėl̃na*, OBG *dlani* 'palm (of the hand)' (Van Windekens 1976: 161 and 616).

Toch. A *āštār*, B *aštare*, *āstre* 'clean, clear': Lett. *stars*, G. *Strahl* 'ray, beam' (Van Windekens 1976: 170 and 616).

Toch. AB *cāmp-*, A *camp-* 'pouvoir', A *tampē* 'force, puissance': Lith. *tempiù* 'tendre, étendre' (Van Windekens 249 and 616).

Toch. AB *kārk-*, A *čark-* 'to bind': Lith. *keĩgti* 'to bind' (Fraenkel, Van Windekens, 1976: 206 and 616).

Toch. B *kurp-* 'se soucier de': Ukr. *žurba* 'souci' (Van Windekens 1976: 245 and 616).

Toch. B *kwal-*, *kwel-* 'trainer' (?): Lett. *zvel'u* 'rouler, déplacer' (Van Windekens 1976: 248 and 616).

Toch. B *kul-* 'bell' from **kľ-* or **kol-*, cf. OBG *klakolū*, Russ. *kolokol* 'bell' from **kolkolo-s*.

Toch. B *laks* 'fish': Lith. *lāšis*, *lašišà*, Lett. *lasis*, OPruss. *lasasso*, Russ. *losos'*, MHG *lahs*, G. *Lachs* 'salmon' from IE **laks-*.

Toch. A *lap* 'head': OBG *lībū* 'skull', Belo-Russ. *lob* 'forehead', Pol. *łeb* 'head'.

Toch. AB *lārk-* 'pendre, être suspendu à': Lith. *lingūoti*, *langóti* 'planer, être suspendu' (Van Windekens 1976: 260 and 616).

Toch. A *lip* 'to leave', cf. OBG *pri-līpeti* 'to hang, stick', Lith. *limpù*, *lipti* 'to remain hung', Goth. *bi-leiban*, G. *bleiben* 'to remain'.

Toch. AB *lu*, B *luwo* 'animal, beast': OBG *lovù* 'hunting'.

Toch. A *lyām*, B *lyam* 'lac': Bulg. *lam* 'trou, fosse, fossé' (Van Windekens 1976: 271: and 616).

Toch. A *lyi* 'humide': OBG *lījō*, *lējō*, Lith. *lieju* 'verser' (Van Windekens 1976: 272 and 616).

Toch. B *maune* 'avidité, aspiration, confusion': Lith. *maudžiù*, *maūsti* 'désirer passionnément' (Van Windekens 1976: 282 and 616).

Toch. A *māk*, B *māka* 'beaucoup de, nombreux, multiple': Lith. *māgulas* 'beaucoup, nombreux' (Van Windekens 1976: 283 and 616).

Toch. A *malke*, B *malk-wer* 'milk', A *mālk-* 'to milk': OBG *mlēko*, E. *milk*, OBG *mlužo*, Gr. *ἀμέλγω* 'to milk'.

³⁸ The majority of the following comparisons are from Van Windekens 1976.

Toch. B *mcm-* 'tromper, duper (?)': Bulg. *mamja* 'allécher, séduire' (Van Windekens 1976: 296 and 616).

Toch. A *masāk*, B *meske* 'tying, tie': Lith. *mėgsti*, *mezgù* 'to tie, mix', *māzgas*, 'knot', OHG, Anglo-Saxon *māska*, G. *Masche* 'knot, loop'.

Toch. B *mik-* 'fermer les yeux': OBG *sū-mēžiiti* 'fermer les yeux' (Van Windekens 1976: 297 and 616).

Toch. A *nwām* 'ill': OBG *u-ny-ti* 'to despair', Czech *ný-ti* 'to be worn out', OBG, Czech *u-navi-ti* 'to get away', Lith. *nõvyti* 'to torment, wear out', *nõvė* 'oppression, torture, death'.

Toch. B *ñake*, *ñke* 'maintenant', *ñke* 'mais, cependent': Serbocr. *něgo* 'mais' (Van Windekens 1976: 323 and 616).

Toch. B *ñare* 'fil, frange': Lith. *neriù* 'enfiler' (Van Windekens 1976: 324 and 616).

Toch. *olyi* acc. sing. = OBG *al(ü)di(i)* 'boat'.

Toch. A *pañi*, B *peñiyo* 'splendeur': Lith. *spinti* 'splendeur, éclat' (Van Windekens 1976: 346 and 616).

Toch. AB *pāl-*, *pāl-* 'to boast, to praise': Lith. *bylá* 'word', *baĩsas* 'voice, sound, noise', OPruss. *billit* 'to speak'.³⁹

Toch. A *pānw-*, B *pānu-*, *pann-* 'to stretch': OBG *pīno*, *pēti* 'to stretch', Lith. *pinti* 'to braid'.

Toch. AB *pārs-* 'to sprinkle, to squirt', cf. Czech *pršeti*, Bulg. *prās-kam* 'to sprinkle'.

Toch. A *pratim*, B *pratiṃ* 'decision': Lith. *su-prāsti* 'to understand', *prōtas* 'intelligence', OPruss. *prātin* acc. 'counsel', Goth. *fraþi* 'thought, intelligence', *fraþjan* 'to understand'.

Toch. A *pratsak*, B *pratsāk* 'chest': (?) OBG *prüsi* 'chest' from IE **pṛk-*.⁴⁰

Toch. B *praçye* 'pouring rain': OBG *prüsti* 'dust' (Van Windekens 1976: 388).

Toch. B *pruk* 'sauter': Russe *prygat* 'sauter' (Van Windekens 1976: 392 and 616).

Toch. A *prutk-*, *protk-*, B *prutk-*, *prautk-* 'to be closed, shut up, filled': Lith. *spraudsi*, *spraudžiu* 'drängen'.

Toch. A *rake*, B *reki* 'word' = OBG *řeči* 'word' from IE **rēkwī-s*.

Toch. A *rāp-*, *rāp-*, B *rap-*, *rāp-* 'to cut into, to dig': OBG *ryjō*, *ryti* 'to dig' (Van Windekens 1976: 403).

Toch. A *rāskār*, B *rāskare* 'âcre, amer, aigu, violent': Lith. *erškėtis* 'Dorn, Schlehdorn-busch' (Van Windekens 1976: 404 and 616).

Toch. AB *rāsw-*, B *rāss-*, A *rsu-* 'arracher, enlever' from (?) **rus-w-*, **rows-w-*, **rews-w-*: OBG *-rušiti* 'to destroy', Bulg. *ruša* 'to destroy', from IE **rows-*, *raz-ruš-vam* from **-rows-(e)w-*.⁴¹

Toch. AB *ruk-* 'maigrir': Lith. *rūkti* 'schrumpfen, runzelig werden' (Van Windekens 1976: 409 and 616).

Toch. B *sāle* 'fondement': Lith. *sūolas* 'banc, chaise' (Van Windekens 1976: 417 and 616).

Toch. A *šärtw-*, B *šärt(i)-* 'pousser, exciter': Lith. *sėrg-mi* 'préservier, protéger, garder' (Van Windekens 1976: 452 and 616).

Toch. B *šer*, A *šar* 'sister' from **sesrā* (or **seser*) = OBG *sestra* from **sesrā* (or Lith. *seseř-s* gen.).

Toch. A *svarp*, *sparp* 'string' from **(s)wṛw-*: (?) Lith. *virvė*, OPruss. *wirbe* 'string', OBG *vrivī* 'string' from **wṛw(i)-*; *s-* in *s-varp* is the same prefix as in Bulg. *s-vürzvam* 'to tie, fasten'; *v-p* through dissimilation of *v-v* as in OPruss. *wirbe* (otherwise Van Windekens 1976: 436).

³⁹ Cf. Benveniste 1936: 2, 236.

⁴⁰ Otherwise Van Windekens 1976: 389.

⁴¹ Otherwise Van Windekens 1976: 404.

Toch. A *škārā*, B *aškār* 'en arrière': Lith. *sukrūs, sūkras* 'sich leicht drehend, gedreht' (Van Windekens 1976: 450 and 616).

Toch. B *çconiyē, çcouo* 'haine' from **stewd-u(o)*: OBG *studū* 'froid; αἰσχύνη' (Van Windekens 1976: 483 and 616).

Toch. A *tarp* 'bog, lake' = OBG *trapū* 'hole' from **torpo-s*, Lith. *tárpas* 'boundary'.

Toch. B *tarçk-* 'tesson' (?): Lith. *draskýti* 'être déchiré' (Van Windekens 1976: 493 and 616).

Toch. A *tāpār(k)* 'now': Russe *teper*, ORuss. *topere* 'now' (Lewy, Van Windekens 1976: 498 and 616).

Toch. B *tālp-* 'se purger': Lith. *tīlpti, telpū* 'avoir de la place, trouver de la place' (Van Windekens 1976: 500 and 616).

Toch. A *tsok-*, *tsuk-*, B *tsuk-*, *tsauk-* 'to drink': Bulg. *cokam, cukam* 'to drink' (onomatopoeic ?); Toch. A *çuk*, B *çuke* 'arome, saveur, suc' is of different origin.

Toch. B *tīn-* 'être sali' (?): OBG *tīna* 'βόσβοτος' (Van Windekens 1976: 505 and 616).

Toch. A *tukri* 'l'imon': Lett. *dūkste* 'marais, marécage, bournier', *dūkans* 'foncé, de couleur sombre' (Van Windekens 1976: 517 and 616).

Toch. A *walke* 'continuously': OBG *velikū* 'great' (Meillet; otherwise Van Windekens 1976: 542).

Toch. B *wāntalye* 'arc': Lith. *vingis* 'Bogen, Krümmung' (Van Windekens 1976: 556 and 616).

Toch. A *wārce* 'inférieur, mauvais': OPruss. *wārgs* 'schlecht, böse' (Van Windekens 1976: 560 and 616).

Toch. A *vrātk-* 'to boil': Lith. *vėrdu, virti* 'to boil', OBG *vřrjq, vřřeti, variti* 'to boil' (Lane).

Toch. A *wrauūa*: Lith. *vārna*, OBG *vrana* 'rook'.⁴²

Toch. A *wsār* 'tas de grain', B *ysāre* 'grain': Russ. *vorox* 'tas de grain' (Van Windekens 1976: 584 and 616).

Toch. A *wsok* 'gay, friendly' from **wes(u)*: OBG *veselū* 'gay'.

Toch. A *yats*, B *yetse* 'peau': Lith. *oda* 'peau, cuir'.

Some correspondences appear only in Tocharian and Balto-Slavic (and Germanic), e. g.:

Toch. AB *kārk-*, A *çark-*: Lith. *keřgti* 'to bind'.

Toch. AB *lānk-*: Lith. *lingūoti, langōti* 'être suspendu'.

Toch. B *mik-* = OBG *sū-mēžiti* 'fermer les yeux'.

Toch. AB *olyi* acc. = OBG *al(ū)di(i)* 'boat'.

Toch. B *pruk-* = Russ. *prygat'* 'to jump'.

Toch. A *rake*, B *reki-*: OBG *rěčī* 'word'.

Toch. AB *ruk-* 'maigrir': Lith. *rūkti* 'schrumpfen'.

Toch. A *tarp-* 'bog, lake': OBG *trapū* 'hole'.

Toch. A *tāpār(k)* 'now': Russ. *teper* 'now'.

Toch. A *yats*, B *yetse*: Lith. *oda* 'skin, hide'.

Toch. A *wrauūa*: Lith. *vārna*, OBG *vrana* 'rook'.

The comparison of Toch. B *laks-* 'fish', Lith. *lāšis*, Lett. *lasis*, OPruss. *la-sasso*, Russ. *losos*, MHG *lahs*, G. *Lachs* 'salmon' from **laks-* is particularly important. The salmon (*Salmo salar*) lives in the rivers which flow through the northern parts of central and eastern Europe into the Baltic and Black Seas. The fact that this word is met in Tocharian, Balto-Slavic, and Germanic is of great importance: it is evidence that the original home of these languages was somewhere in central eastern Europe.

⁴² Krause 1948-51: 109; Van Windekens 1976: 583.

Besides these correspondences in Tocharian and Balto-Slavic there are also many other genetically identical words which have correspondences in other IE languages as well.

Toch. A *čām*, B *čana* = OBG *žena*, OPruss *genno* 'woman'.

Toch. AB *čwätsi* inf. 'to eat' = OBG *žīvati*, Russ. *ževat'* inf. 'to munch'.

Toch. A *kam*, B *keme* 'tooth' from **gombho-s* = OBG *zqbū*, Alb. *dhëmb*, also in other languages but with slightly different meanings.

Toch. B *kor* 'throat': OBG *grūlo*, Lith. *gurklė*, Arm. *kokord* 'throat'.

Toch. B *parwe* 'first' from PIE **prh₂wo-* = OBG *prīvū*, Alb. *parë*, Skt. *pūrva-*, Av. *paurva-* 'first'.

Toch. A *pik-*, *pek-*, B *pik-*, *paik-* 'to draw, to write' = OBG *pišq*, *płsati*, Iran. *pis-* 'to write'.

Toch. A *saku*, B *sekwe*: OBG *sokū*, Gr. *ὀπός* 'juice'.

Toch. A *sark* 'illness': Lith. *sėrgu*, *siřkti* 'to be ill', OIr. *sarg* 'illness' (Benveniste 1936: 2, 236).

Toch. B *twere*: OBG *dvīrl* 'door'.

Toch. A *wās*, B *yasa*, *ysā-* 'gold': Lith. *auškas*, OLith. *aušas*, OPruss. *ausis*, L. *aurum* 'gold'.

Toch. A *yal* 'gazelle': Lith. *ėlnis*, OBG *jelenū* 'deer'; and many others.

Furthermore, there are many correspondences in Tocharian and Germanic (Van Windekens 1976: 614-5) that are very closely related to Balto-Slavic.

9.8. Conclusion

In Tocharian and Balto-Slavic there are many phonological, morphological, word-formational, and lexical correspondences which clearly show the close relationship between these languages.

Basing his view on various considerations, especially the fact that there is a certain Finno-Ugrian substratum in Tocharian, Krause (1948-51: 200) came to the conclusion that the original home of the Tocharians was the region extending approximately between the Dnieper River and the Urals and bordering with the Finno-Ugrians.

In this book we pointed out the close relationship between Balto-Slavic and Germanic.

On the basis of the data we have analyzed we can assume that at some very remote time, the ancestors of the Germanic tribes, the Balto-Slavs, and the Tocharians formed a Northern IE dialect group which split from the common IE at a very early stage and later (probably during the 4th millennium B. C.) dissolved into Germanic-Balto-Slavic and Tocharian.

Therefore, the following languages neighbored on Balto-Slavic: Germanic to the west, Tocharian to the east (or northeast), and Dacian to the south. Later, when the Proto-Tocharians moved to the east and when the Balto-Slavic unity was dissolved, Slavic spread to the southeast and came into contact with Iranian.

The Relationships between the Language Groups within the IE Family

The problem of the relationships between the IE language groups has been examined often in many books and numerous articles, beginning with J. Schmidt's *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen* (1872) and Fick's *Die ehemalige Spracheinheit der Indogermanen Europas* (1873), and is being studied at the present time. Special mention should be made of two of the works which investigate this problem systematically: Porzig's *Die Gliederung des indogermanischen Sprachgebiets* (1954a) and the collective work edited by Birnbaum and Puhvel, *Ancient Indo-European Dialects* (1966).

The relations among the different IE language groups within the IE family are determined on the basis of the characteristic phonematic, morphological, syntactical, lexical, and word-formative elements they have in common, bearing in mind that the **innovations in common** are more important than the preserved archaisms. In drawing conclusions, specific features in common are not as important as their quantity: the more isomorphs, isophonemes, isolexemes, etc., which the two language groups have in common, the closer the relationship is. The most important features in this respect are the morphological peculiarities in common since the morphological structure of the language is the most stable and morphological elements are most difficult to borrow; word-formative and phonematic features in common are second in importance, while the lexical and syntactical features are the least important since they appear very easily when languages come in contact with one another.

In the preceding two chapters a detailed analysis was made of the interrelations between Balto-Slavic, Germanic, Indo-Iranian, and Tocharian, because there are considerable differences in the specialists' views on this matter and a sound justification of my point of view was necessary. Furthermore, in the previous chapters detailed data and assumptions were given about languages such as Greek, Hittite-Luwian, Etruscan, Thracian, Dacian, Phrygian, etc., because recent investigations of these languages have thrown new light on them. No important new texts have been found for languages such as Italic, Celtic, Indo-Iranian, and Armenian: the data about these languages have been known for a long time and there is no essential change in the views on their relations. For this reason they will be examined only briefly. However, the less known languages which have been investigated recently will be discussed in more detail mainly in view of the newly found inscriptions.

10.1. Italic and Celtic

According to the traditional view, Italic consists of Latin-Faliscan and Oscan-Umbrian. These two groups go back to a common Italic which was probably spoken during the 3rd millennium B. C. The principle characteristic features in common between Latin-Faliscan and Oscan-Umbrian are as follows.¹

- (1) A system of five nominal declensions.
- (2) Spreading of the ablative singular case ending in *-d* from the *o*-stems to nouns of all stem classes.
- (3) Spreading of the ending for the dative-ablative plural from the *o*-stems to the *i*-stems.
- (4) The pronominal stem **eo-*.
- (5) The specialized development of the interrogative-indefinite pronouns: L. *quis, quid* = Osc. *pis, pid*; L. *qui, quae, quod* = Osc. *puī, pai, pīd*; L. *quisque, quicquid* = Osc. *pispis, pitpit*; L. *quīlibet* = Umbr. *pis-her*; L. *uterque* = Osc. pl. *pūtūrūs-pīd*.
- (6) A system of four verbal conjugations.
- (7) Imperfect with a characteristic *-bhā-*: L. *amā-ba-m*, Osc. *fu-fa-us*.
- (8) Imperfect subjunctive in *-sē-*: L. *foret* = Osc. *fusid* from **fu-sē-d*.
- (9) Shifting of IE **esmi* 'I am' into **som*: L. *sum*, Osc. *sūm*.
- (10) Gerundive in *-nd-*: L. *operandam* = Osc. *ūpsannam*, L. *sacrandae* = Osc. *sak-rannas*, L. *piandī* = Umbr. *pihaner*.
- (11) IE *bh-*, *dh-* > *f-*: L. *frātrum* = Osc., Umbr. *fratrum* gen. pl., L. *faciat* = Osc. *fakiīad*, Umbr. *fačia* 3rd pers. pres. subj.
- (12) Some words in common: L. *famulus* 'serf', *familia* 'family' = Osc. *famel* (gloss), *famelo* 'familia', Umbr. *fameñias* nom. pl.; L. *fānum* 'sanctuary', Osc. *filtsnam* acc. sing., Umbr. *fesnaf-e* acc. pl.; L. *hasta* 'spear', Umbr. *hostatu* 'hostatos'; L. *pāx* 'peace' = Umbr. *pase* abl. sing.; etc.

For a long time this traditional conception was the only view on the Italic languages and it is still predominant today. But lately a new thesis, whose main supporter is Devoto (1976: 45-47; 1969b: 59-61), has appeared.² According to Devoto, Latin and Oscan-Umbrian are two different IE languages which came close together due to their geographical proximity in Italy. In his *Storia della lingua di Roma* (1969b: 67) Devoto writes: "The elements in common between Latin and Oscan-Umbrian are recent; the divergences are ancient." According to Devoto, the name "Italic" should be retained only for Oscan-Umbrian. This hypothesis has adherents primarily among the Italian linguists; it has few supporters outside Italy. In my opinion, the quantity of elements in common between Latin (Faliscan) and Oscan-Umbrian is quite considerable, especially in the morphology, which is the most important, so that the traditional point of view remains tenable. But Devoto is correct in saying that the differences between these languages are essential. The relationship between Latin and Oscan-Umbrian is not the same as the close relationship between two Germanic languages such as German and Swedisch. On the basis of all the data about these languages (bearing in mind, of course, that the data on Oscan-Umbrian are very scanty), we can accept that they were two Proto-Italic dialects or two neighboring

¹ See Porzig 1954a: 97-98; Beeler 1966: 53-54.

² See also Kretschmer 1940-43 (vol. 30): 136-138.

closely related IE dialects in some very remote period (during the 3rd or the 4th millennium B. C.) somewhere in contemporary southern Germany, southern Austria, and western Yugoslavia. We can also accept that the tribes speaking these languages penetrated into central Italy at different times.

* * *

The hypothesis of an Italo-Celtic language unity was proposed for the first time by Lottner (1861) and it was the dominant view for a long time. It was seriously criticized by Marstrander (1929) and thereafter it was refuted by the majority of linguists. One of its staunchest adherents was Meillet, who was so highly respected that his ideas influenced the thinking of some linguists even now.³ Recently this hypothesis, as well as the problem of the relationship between Celtic and the other IE languages within the IE family were again thoroughly reviewed and criticized by Watkins (1966), Meid (1968), and K. H. Schmidt (1969).

There is no doubt, however, that Celtic has some characteristic features in common with Italic. Some of these features have correspondences in Venetic, Messapic, and Germanic, as well as in some other IE languages.

(1) The ending *-i* for the gen. sing. of the *o*-stems: Latin, Celtic, Venetic, and Messapic.

(2) Subjunctive with a characteristic *-ā-*: Italic, Celtic, and Tocharian.

(3) Medio-passive forms in *-r*: Italic, Celtic, Venetic, Phrygian, Hittite-Luwian, and Tocharian.

(4) Superlative in *-smo-*: Celtic and Italic (L. *maximus*, *maxumus*, Osc. *nessimas* 'proximae', OIr. *nessam* 'closest').

(5) The suffix *-tīōn-* for forming abstract nouns: Italic and Celtic.

(6) The suffix *-tūt-* for forming abstract nouns: Italic, Celtic, and Germanic.

(7) Assimilation IE *p — kw > kw — kw*: Latin (Oscan-Umbrian?) and Irish (Goidelic, but not Gallo-Britannic) only as a parallel (independent) phenomenon.

(8) Typical words in common: L. *cano*, perf. *cecini*, Umbr. *kanetu* 'canito', OIr. *canim*., pret. *cechan* 'to sing'; *crēdo*, OIr. *cretim*, Cymr. *credu* 'to believe' (and Skt. *śrād dādhati* 'believes'); *crispus* = Cymr. *crych* 'wavy'; *cum* = OIr. *com-*, *con-* 'with' (G., Goth. *ga-*); *dē* = OIr. *dī* 'from'; *pectus*, OIr. *ucht* 'bosom'; *rēx* = Gall. *rig-*, *-rix*, OIr. *rī* 'king' (Skt. *rāj-*); *saeculum*, Cymr. *hoedl*, Middle Bret. *hoazi* 'life'; *vātēs* = OIr. *fáith* 'poet'; *veru* Umbr. *beru* = OIr. *bir*, Cymr. *ber* 'spear': etc.

These data show that, despite the fact that it is hardly possible to speak of a Proto-Italo-Celtic language, Italic and Celtic nevertheless have a number of features in common. On this basis one can draw the conclusion that Italic and Celtic were derived from IE dialects which at some very remote period (probably during the 4th or 5th millennium B. C.) were spoken in neighboring regions⁴ somewhere in contemporary south Germany, south Austria, and west Yugoslavia.

In ancient times, before the invasion by the Celts, western Europe to the west of the Rhine was inhabited by non-IE tribes and peoples. There are certain data which support the assumption that there were pre-Celtic IE

³ See sections 8.1 and 11.5.

⁴ See Campanile 1968. According to A. Wagner (1971: 209), "the earliest home of the Celts" had been in contemporary Hungary and the adjacent regions.

languages in some regions of western Europe. This applies, for instance, to the languages of the Gallaecians and the Asturians in the northwestern part of the Iberian Peninsula.⁵

10.2. *Linguae "Minores" Italiae Antiquae*

10.2.1. Lepontic

To the north of Milan in the region of the Maggiore, Lugano, and Como lakes (approximately from Cernusco, Alzate, Vergiate, Levo to the south and up to Raschlinas on the upper part of the Rhine to the north), about 80 short inscriptions were found (half of them consisting of only one name, many of which were damaged or abbreviated) and were conventionally called **Lepontic** after the name of the tribe *Lepontii* (Caes., Pliny) which is now preserved in the place name *Val Leventina*. The Lepontic inscriptions (4th-1st centuries B.C.) and glosses were published by Whatmough (1933).⁶ Recently they were thoroughly investigated by Lejeune in his book *Lepontica* (1971a). The most typical features of Lepontic are as follows:

o-declension: nom. sing. *-os* (*Alkoninos, Komoneos, Runelos, Ritukalos*); nom. acc. sing. n. *-om* (*uinom našom*); gen. sing. *-i* (*Aškoneti, Ašouni, Raneni*); dat. sing. *-ui* (*Amui, Kualui, Metelui, Tektalui*); dat. pl. *-opos* (*Uoltiauiopos*).

ā-declension: nom. sing. *-ā* (*pala* 'tombstone'; *Koimila*); acc. sing. *-am* (*palam, pruiam* 'cellam'); dat. sing. *-ai* (*Sapsutai, Slaniai, Verkalai*).

i-stems: nom. sing. *-is* (*Uvamokozis*).

on-stems: nom. sing. *-u* (*Minuku, Namu, Remu*); dat. sing. *-on-ei* (*Atilonei, Piuonei*); dat. pl. *-on-epos* (*Ariuonepos*).

Patronymic suffixes: *-io-*, *-eo-* (*Esopnio, Komoneos, Uarsileos*); *-ikno-* (*Tanotaliknoi* nom. pl., *Trutiknos, Metelikna*);⁷ *-al(o)-* (*Tunal, Ualaunal; Maešitalui* dat. sing., *Tekialui, Uerkalai*).

Vocabulary: *pala* 'tombstone',⁸ *-pe* '-que'; *pruiam* acc. 'cellam (?)'; *kalite, karite*, verbs with unclear meanings.

The old view on the position of Lepontic within the IE family was that it was closely related to Celtic and Italic.⁹ Lejeune (1971a: 121), after analyzing and to a certain degree correcting the data, came to the plausible conclusion that Lepontic was a Celtic dialect or language. According to Lejeune, in antiquity in the region of Lugano there were two successive Celtic populations: first the Lepontians and then, from the 4th century B.C. onwards, the Gauls.

An Etruscan (Raetic) influence is found in Lepontic (adstratum: cf. the patronymic suffix *-al-*); this corresponds well to the information given by Livy, who unfortunately confuses origin with adstratum (or superstratum), see below.

⁵ See Schmoll 1959: 119-122.

⁶ Whatmough 1933 = *PID*. See also Pisani 1964: 280-288.

⁷ The patronymic suffix *-ikno-* has exact correspondences in Gallic: it is of Celtic origin.

⁸ This word is not pre-IE, as is usually assumed, but is derived from IE **p̥ls(y)ā* or **polsā* and is related to Gr. *πέλλα* 'stone', Skt. *pāṣyā-m* 'stone' from **pels-yo-*, Pashto *parša*, OIr. *all* n. 'rock' from **p̥lso-*, OHG *felis* m., *felisa* f., G. *Fels* 'rock', cf. Pokorny 1951-69: 807 who adds the word **pella*, **palla* as pre-Romance; cf. Pisani 1964: 279.

⁹ See Risch 1970: 130; Devoto 1962: 384.

10.2.2. Ligurian

Ligurian is known to us only through several glosses and proper names. It is probably a non-IE language. A typical Ligurian toponymic suffix is *-asco-*, *-asca* (cf. *Tulelasca*, *Veraglasca*). But some Ligurian glosses and place names are clearly of IE origin, for instance:¹⁰

The Ligurian name of the Po River is *Bodincus* (Pliny), *Βόδεγκος* (Polyb.) meaning 'fundo carens'¹¹ in Ligurian: the name is derived from IE **b^hodh^hko-* 'deep' and is related to Skt. *budhna-h* 'bottom, ground, base', L. *fundus* 'base', etc.

asia 'secale' (*Taurini sub Alpibus*, a Ligurian tribe), probably *sasia* (cf. *Alpibus asiam*) = Skt. *sasyá-m* 'grain', Cymr. *haidd*, Bret. *heiz* 'oats'.

Bormanus 'a god of the springs', *aquae Bormiae* from **bormo-* < IE **gwhormo-* 'hot'.

Comberanea, the name of a river, literally 'confluens' from *com-* = L. *con-* and *beran-* from IE **bher-* 'to carry'.

Eniseca, the name of a river, from **eni-* = Gr. *ἐνι*, L. *in* and **sek-*, cf. L. *seco* 'to cut'.

Porcobera, the name of a river, cf. Mlr. *orc* 'salmon' from **porco-* and *-bera* from IE **bher-* 'to carry'.

Prenicus (mons) from IE **kwen-*, cf. OIr. *crann*, Cymr. *prenn* 'tree'.

Vindupale, the name of a river, from **windo-* = OIr. *find* 'white' and *pala* 'stone'; etc.

The name of the Alps should probably also be ascribed to Ligurian: this name passed on into Latin via Etruscan: *Alpēs* with *b* > Etr. *p*, and *-es*, the Etruscan ending for the plural of *a* (IE *o-*) stems from Ligur. **Alb-* 'albi (montes)'.

On the basis of these data Pisani (1964: 292) concluded: "in the territory of the inscriptions, as well as in the rest of Ligurian an essentially uniform IE layer has been superimposed on an 'old Ligurian' substratum that was also uniform. Before the Roman occupation we find direct or indirect Gallic influences, which appear especially in the onomastics."

10.2.3. Raetic or North Etruscan

The region of the Raetic inscriptions, i. e., the language of the ancient *Raeti*, is located to the west of the region of the Venetic inscriptions, from Verona and Padua in the south and as far as Himmelreich and Steinberg (east of Innsbruck in Austria) in the north. These inscriptions, about 50 in number, are from the second half of the 1st millennium B. C., probably from the 4th-1st centuries. Some short inscriptions, about 30 altogether, are also ascribed to Raetic (Western Raetic): they come from Val Camonica, Voltino, Sondrio, and Castaneda and they consist mainly of one word (probably a personal name) whose reading is not completely reliable:¹² the assumption that these short inscriptions are Raetic is not probable.

A passage in Livy (56 B. C.—17 A. D), who was born in Patavium-Padua and therefore was able to get quite a good information about the Raetians and their language, is of special value with regard to Raetic. Livy writes (5, 33, 11): "*Alpinis quoque ea (i. e., a Tuscis) gentibus haud dubie origo*

¹⁰ See Pisani 1964: 290-292.

¹¹ Pliny, NH, III, 122: *Ligurum quidem lingua amnem ipsum Bodincum vocari, quod significet fundo carentem.*

¹² See Whatmough 1933: 3-10; Pisani 1964: 280-282; Risch 1970: 132.

est, maxime Raetis, quos loca ipsa efferarunt, ne quid ex antiquo praeter sonum linguae nec eum incorruptum retinerent." Similarly Pliny writes (NH 3, 133): "Raetos Tuscorum prolem arbitrantur a Gallis pulsos duce Raeto." This information must be interpreted in the following way: in the 8th and 7th centuries B. C. the Etruscans colonized Felsina (Bologna), and later, after the 6th century B. C., Spina, Adria, Ravenna, Rimini, and still later the valley of the Po River from Spina and Adria to the Ticino River to the west.¹³ The Etruscan domain in north Italy was in the neighborhood of the Venetians to the east and of the Lepontians and Ligurians to the west. In this region a substratum consisting of Ligurians, Lepontians (Celts), Venetians, and probably also of Umbrians, was Etruscanized. From the end of the 5th century B. C. onwards the invasion of the Gauls in north Italy (from 400 B. C. onwards) gradually put an end to the Etruscan rule in this region.¹⁴ Part of the Etruscanized population had to retire into the Alps, into Raetia. And thus **Raetic is (North) Etruscan and was formed by the Etruscanization of a north Italic substratum.**¹⁵ The way this took place is similar to what occurred in Rumanian, which is a Romanized Dacian substratum.

The facts about the Raetic inscriptions indicate that this was a **North Etruscan dialect**. The most typical phonological, grammatical, and lexical elements which have exact correspondences in Etruscan are the following:

Phonology: (1) four vowels: *a, e, i, u*; (2) the lack of voiced consonants.

Morphology: (1) gen. sing. *-(e)s* (*Anes, Perunies, Renies*), *-is* (*Velis*), *-usa* (*Sipianusa*); (2) dat. sing. *-e* (*Estuale, Lašanuale, Ritale*); *-u(v)a* (*asua, asuva*); (3) abl. sing. f. *-a* (*Kaia*); (4) pret. in *-xjke* (*šinaxe, -ke, vašinxe*); (5) pronouns: *m* = Etr. *mi* 'ego, me', *s* (*š*) = Etr. *s* 'is', *pe* = Etr. *pe* 'ea', (*i*)*n* = Etr. *in, ni* (acc. *nin*) = Etr. *ni* 'iste'.

Word formation: (1) the possessive suffix *-al* (*Estual-e, Ritale*); (2) the hypocoristic suffixes *-u* (*Uiu*) and *-iku* (*Leutiku, Šupiku*).

Vocabulary: *asua, asuva* dat. sing. = Etr. *ašu* 'bonum, salus'; *ei* = Etr. *ei* 'fecit'; *eke, exe* = Etr. *hece* 'fecit'; *-k* = Etr. *-c/k* 'que'; *maz* = Etr. *maz* 'donum'; *pa, qa* = Etr. *pa, fa* 'dat, da'; *-un* = Etr. *-(u)n, -n* 'autem'; *šinake* = Etr. *zinace* 'elaboravit, fecit'.

Personal names: *Anes* = Etr. *Anes*, gen. of *Ane*; *Aqir[θe]* = Etr. *Apirθe*; *Kaia* = Etr. *Caia*, dat.-abl. of *Cai*; *Laturu*, cf. Etr. *Larθurus* gen.; *Perunies* gen., cf. Etr. *Perna Pernei*; *Šiβu* = Etr. *Siθu, Setu*; *Uiu*, cf. Etr. *Uvie, Uvia*; *Velis* = Etr. *Velis* gen. from *Vel*; *Vise* = Etr. *Vize*.

Furthermore Venetic, Gallic (Lepontic), and Umbrian names which come from the substratum are found in the onomastics.

Venetic names: *Akvil* (or *L.*) = *L. Aquila*; *Φuti-xinu*, cf. Ven. *Φuti-cakos*; *Raki*, cf. Ven. *Rakoi* dat.; *Reite, Rita* = Ven. *Reitiia, Ritia*; *Tiutis* gen., cf. Ven. *teuta*; *Valtikiu* = Ven. *Voltixnos, Valtequiu*, cf. Ven. *Voltios*.

Lepontic (? = Gallic) names: *Klevie* = Gall. *Clevius*; *Pnake* = Gall. *Benacus*.

Umbrian names (?): *Estu* = *L. aestus*, *-ūs* 'heat; commotion'; *Piperisnati* dat., cf. *L. piperinus lapis*; *zeve* (?) from IE **diwey* dat.

Below are some Raetic inscriptions with their Latin translation and short explanatory notes.

PID (Magrè; votive inscription on a deer horn) *[e]stuva ŋinaxe* 'Aestui fecit'.

Estuva = *Esstua* (*PID* 233) = *Estu* (*PID* 234) is 'probably the name of a local deity = *L. aestus*, *-ūs* 'heat, commotion', cf. *Bormanus*, a Ligurian god of the springs, from IE **gwhormo-* 'hot'; *-u(v)a* is the Etruscan ending for the dative of *u*-stems.

¹³ Cf. Pallottino 1968a: 154-156.

¹⁴ Cf. Pallottino 1968a: 154-156.

¹⁵ According to Wolff (1954: 191-197), Raetic is an IE language.

Cf. the Venetic inscriptions: *Voto Klutiaris fagsto* (Pellegrini and Prosdocimi 1967 : 1, 372). *Hevissos O(...oi fagsto* (1967 : 1, 370).

PID 232 (Magrè; deer horn) *estuale apir[θe]* 'Aestual Aphir[thus] (*scil.* vovlt *sive* dat)', *Estual-e* dat. of *Estu-al-* 'sanctuary of Estu', cf. Etr. *Unialθi* loc. 'in the sanctuary of Uni (= Iuno)'.

Apir[θe] = Etr. *Apirθe*, a male personal name.

PID 237 (Magrè; horn) *klevie va.Ltikinu asua* 'Cluvius Valti-fillus (= Voltus) saluti (= pro salute)'.

Klevie = Gall. *Clevius*, L. *Cluvius*, a personal name; the ending *-e* is Etruscan. *Valti-kinu* = Ven. *Volti-xnos*, cf. also *Volti-xenei* dat.; Raetic *-kinu* = Ven. *-xnos*, Lepont. *-kna* f. is a Celtic partonymic suffix.

asua dat. from Etr. *asū* 'bonum, possessio; salus, fortuna, felicitas'.

PID 197 (Sanzeno, southwest of Bolzano; bronze figurine of a warrior) *laturu sipianusa pa nin* 'Larthur Sepiani dat istam (*scil.* statuam)'.

Laturu (with dissimilation of *r* — *r* > *o* — *r*) nom. = Etr. *Larθurus* gen., a male personal name.

Sipianusa gen. (*u*-stem), a family name, cf. Etr. *Sepie*, *Sepi*, family names, L. *Seppius*. *pa* = Etr. *pa* 'dat, da' or 'dedit' = Hitt. *paai* 'dat, da'; *nin* acc. = Etr. *ni* 'iste'.

Cf. the Venetic inscription *[Ak]utina doto Reittai* (Pellegrini and Prosdocimi 1967 : 1, 120).

PID 192 (Moritzing [Bolzano]; bronze vessel) *pe vasnixe šiupiku tiutis axvili piperis-nati* 'Ea (= haec) comparare-iussit *S(i)upica Tutii Aquilae Piperisnati'.

pe = Etr. *pe*, Hitt. *apee* 'ea'.

vas-n-ixe, a derivative of Hitt. *was-* 'to buy, to procure' with the causative suffix *-nu-*, *Tiutis* gen., cf. Etr. *Tuti*, L. *Tütia*, Ven. *teuta*, Osc.-Umbr. *to(u)ta*.

Axvili dat. of *Akvil* (*PID 244*) = L. *Aquila*, *aquila* 'eagle': in this case it is the name of a local deity.

Piperisnati dat. of an ethnicon formed as L. *Arpinās*, *-ātis* from *Arpinum*, cf. L. *piperinus lapis*.

PID 189 (Klobenstein-on-Ritten; porphyry block) *las eke maz exe* 'Las fecit, donum fecit'.

Las, cf. Etr. *Las*, *Las-al*, personal names.

eke, exe = Etr. *hece* 'fecit'.

maz = Etr. *maz* 'donum'.

PID 228 (Magrè; deer horn) *ritale lemai s pinake* 'Relt(i)all (pro r.) Lemia (?) id (= hoc) fecit'.

Rital-e dat., a derivative of *Rit-a* (*PID 221*), the name of a goddess, cf. *Estual-e*.

Lemai is probably a female personal name in *-ai*, a typical Etruscan ending, cf. the Venetic personal names *Lemonei* dat., *Lemeto* dat., *Lemeto*r-.

PID 196 (Stadehof-Kaltern [Caldaro]; granite block) (a) *pnake: vitamu laxe* (b) *pe* 'Benacus apportavit me, Laches dicavit'.

Pnake = Gall. *Benacus*, a personal name, cf. Etr. *Mnele* = Gr. *Μενέλαος*.

vita-mu; *vita* = Hitt. *widaait* 3rd pers. sing. pret. of *wida-* (*weda-*) 'to bring'; *mu* = Etr. *mux*, Hitt. *-mu* 'me, mihi', *ammuk* 'ego, me'.

Laxe = Gr. *Λάχης*, *Laches*, Etr. *Laxu*.

pe = Hitt. *te* 3rd pers. sing. pret. of *te-* 'to say'.

10.2.4. Venetic

The Venetic language is known from about 250 short inscriptions which were found in the region of Venetia (Este, Adria, Padova, Vicenza, Treviso, Oderzo, Belluno, Cadore, Agordino, Isonzo, Trieste, Valle di Zeglia = Gailtal) which extends approximately from Este and Adria to the south and up to Carinthia on the upper part of the Drava River to the north. The Venetic inscriptions were published and investigated recently by Pellegrini and Prosdocimi (1967) and Lejeune (1974). They date from the 5th to 1st centuries B. C. In antiquity the Boden Lake in north Switzerland was called *lacus Venetus*. This shows that Venetians lived even further north than the region where the inscriptions were found. It can be assumed that the Proto-Venetians lived in southern and western Austria, northeastern Italy and in the most western part of contemporary Yugoslavia. The IE origin of the Venetic language is beyond any doubt. Below are some typical Venetic words.

deivos acc. pl. (?) = L. *deōs*.

donom, -*n* = L. *donum*.

doto 'dedit'.

donasto 'donavit'.

ego = L. *ego*; *mego* 'me'.

ekvon = L. *equum* acc. sing.

fagsto 'fecit' or '(ἀν)έθηκε', cf. L. *faxo*, *faxim*, *faxitur*.

foug-, *fug-* (in the personal names *Fougoniei* dat., *Fugiia*) = L. *fugio*.

hosti- = *hostis* in the personal name *Hosti-havos*.

kapros (in the personal name *Kapros*) = L. *caper*.

ke 'et, -que'

louderobos 'liberis', *Louderai* = L. *Liberae* (female name) dat.

op (preposition) = L. *ob*, Osc. *op*, *up*.

per = L. *per*.

sselboissethoi dat., cf. OHG (*der*) *selb selbo*, Goth. *silba*, E. *self*.

ternuon- (in *Termonios deivos*) = L. *termen*, -*inis*.

tenta = Osc. *touto* 'civitas, populus', Umbr. *tota*.

toler, *tolar*, *atolere*, cf. L. *tollo* 'to raise', OL. *tulō* 'to carry'.

u (preposition) 'pro' = Skt. *ud-*, Goth. *ut* 'outside', G. *aus* 'from'.

On the basis of the most reliable interpretations one can point out the following characteristic features of Venetic:

Vowels: *a*, *e*, *i*, *o*, *u*, *ā*, *ō*.

Diphthongs: *ei*, *ai*, *oi*; IE *ew* > Ven. *eu*, *ou*.

IE *dh* > Ven. *f*; IE *gh* > Ven. *h*; IE *kw* > Ven. *kv*.

Case endings: *ā*-stems: nom. -*a*, dat. -*ai*, acc. -*an*; *o*-stems: nom. -*os*, dat. -*oi*, acc. -*om*; *n*, dat. pl. -*obos*, acc. pl. -*os*; consonant stems: dat. -*ei*, nom. pl. -*es*.

Verbal endings: -*to*, -*sto*, -(*a*)*r* -*er*, -*ere*.

Suffixes: -*io-*, -(*i*)*ko-*, -(*i*)*na*.

For a long time Venetic was identified with Illyrian. On this basis Krahe worked out an Illyrian thesis which was highly respected from 1930 to 1950, especially in Germany. The discovery of new Venetic inscriptions and the thorough investigation of them has, however, resulted in the classification of Venetic as a specific IE language. Thus Krahe's hypothesis became groundless.

The data examined above show that Venetic was closely related to Latin and on the whole to Italic;¹⁶ however, it had certain items in common with Celtic, Germanic¹⁷, and Illyrian as well.¹⁸

A certain Etruscan influence is found in Venetic, cf. *atraes* 'mandavit, iussit'¹⁹ (Lejeune) = Hitt. *hatraais* 3rd pers. sing. pret. of *hatr-* 'to write, inform; to order', Etr. *atrsr* = Hitt. *hatressar* 'message, order'; *tideimes* gen. 'son', which is of Hittite-Luwian origin, is probably also due to Etruscan influence, cf. Lyc. *tideimi* 'son', Luw. *titai(m)mi-* 'nourisson'.²⁰

Moreover, Venetic has some features in common with Slavic:

Goltanos, a personal name, = Bulg. *Zlatan*, a personal name, from IE **gholt-āno-s*, a derivative of OBG *zlato* 'gold' from IE **gholto-m*.

Moldo, a personal name, *-ōn*-stem, cf. OSerbocroat. *Mladēnū*, *Mladenū*, Bulg. *Mladen* from IE **moldh-ēn(-o)-*, a derivative of OBG *mladū* 'young'; the Slavic names are primitive (*ž*)*n*-stems.²¹

The Venetic female names meaning 'daughter of', 'wife of' (patronymic or gamonymic) and ending in *-(i)na* are especially typical; they have exact correspondences in the Slavic personal names in *-lnā*, cf. Russ. *Maria Ivanovna* 'Mary, daughter of Ivan'.²²

Frema Iuantina 'Frema Iuvantis uxor': *Iuantina* is a derivative of *Iuvantis*, a male personal name.

Nerka Lemetorna: *Lemetorna* is a derivative of *Lemetor-*, a male personal name.

Fofugon]tai Ostina dat., a derivative of *Ost(i)o-*, a male personal name.

Fugia Urkleina, a derivative of *Urklloi* dat., a male personal name.

Fugsia Votna, a derivative of *Votos*, a male personal name.

Recently Polomé (1966: 71-76) criticized the thesis that Venetic was an Italic dialect. He is correct in his criticism that "no cogent argument on the morphological level compels the conclusion that Venetic is an Italic dialect." (p. 76). But he goes too far, for the data does show that Venetic as an independent IE language is closest to Latin.

As far as the elements in common in the onomastics of Istria and Liburnia are concerned, Katičić (1964c) classified Istrian and Liburnian together with Venetic.²³

10.2.5. North and South Picenian

Picenian (Eastern Italic or Old Sabellian) is the name given to the inscriptions found in the neighborhood of the town of Picenum. They fall into two groups: three North Picenian (Northeastern Italic) inscriptions

¹⁶ Cf. Lejeune 1953; 1955; 1974: 171-3; Hamp 1954; Porzig 1960; Untermann 1961; Pisani 1964: 251, 279; Carruba 1976.

¹⁷ See Beeler 1956: 48; Pellegrini 1955: 271.

¹⁸ Cf. Kretschmer 1940-43: 34-35; Tronskij 1953: 56; Krahe 1954: 121; Porzig 1954a: 95; according to Polomé 1957 and 1966, Venetic does not have an especially close relationship either with Germanic or with Italic.

¹⁹ See Pellegrini and Prosdocimi 1967: 2, 383: (Vicenza, stone) *Osts Katusiaios donasto atraes Termonios deivos* 'O. K. donavit: mandavit (= iussit) Termonius deus'.

²⁰ See Pellegrini and Prosdocimi 1967: 2, 174-175.

²¹ See Georgiev 1969f: 113-114. On the comparison of the two Venetic names with Slavic see also Pisani 1964a: 274-275; Pellegrini and Prosdocimi 1967: 2, 99-100 and 141-142; as well as all the works published thus far.

²² See Lejeune 1955: 24-26.

²³ See also Zammarrin de Savorgnam 1963.

found in Novilara, Fano, Pesaro and ten South Picenian (Southeastern Italic) found in Belmonte Piceno, Acquaviva, Castignano, Sant-Omero, Bellante, Crecchio, Superaequom (Castelvecchio Subequo), and Capestrano.

The longest inscription on the stele from Novilara is as yet undeciphered.

Most of the other inscriptions are very short and their interpretations are usually unreliable. In the longest South Picenian inscription there are words which are clearly related to Italic: *estu, sūafs, manus, matereth, patereth*. These and similar words led to the assumption that the language of the South Picenian inscriptions is an Oscan-Umbrian dialect or a language closely related to Oscan-Umbrian.

10.2.6. Messapic

The Messapic language is known to us to a certain degree through some 400 inscriptions, most of which were found in ancient Calabria (in the regions of Sallentini and Messapii), and the rest of which were found in the regions of ancient Peucetii and Daunii (extending almost up to Garganus mons and Argyripa-Arpi in the north). The majority of these inscriptions, which date back to the 6th-1st centuries B. C., are very short. The Messapic inscriptions and glosses are published by Parlangeli (1960) and de Simone (1964)²⁴ and are thoroughly investigated by Haas (1962) and de Simone (1962). Below are the most typical Messapic words whose meanings are well established:

ai = West Gr., Aeol. *ai* 'if'.

ana (dat., *anan* acc.), an epithet of Aphrodite ('mother'), = Etr. *ana*, Hitt. *anna-s* 'mother'.

anda 'before' = Hitt. *anda* 'in, under, between', Alb. *ndë* 'in', L. *ante* 'before'.

ap(a) 'ἀπό' = Hitt. *appa* 'behind, after', L. *ab*, Gr. *ἀπό* 'from'.

βανύλα 'οἰκία', *βύμιον* 'οἰκῆμα': Olcel. *būr* n. 'Vorratshaus, Frauengemach', Anglo-Saxon *būr* m. 'hut, room', OHG *būr* m. 'house, cage', Alb. *buj* (**bunyō*) 'to live, sleep overnight'.

Balakrahiaihi gen., a family name, cf. Mac. *Βάλακρος*, Thess. *Φάλακρος* from *φαλός* 'white' and *ἄκρος* 'highest, topmost'.

Balias = Hom. (Pel.) *βαλός*, Gr. *γαλός* 'having a patch of white'.

(*ma*) *beran* = L. (*ne*) *ferant*.

bilīa, (*bilīva*, *bilīova*) = L. *filia*, Alb. *bilë* 'daughter', *bilīhi* gen. = L. *filii*, Alb. *bir* 'son'.

blamini = L. *flamini* dat.

βοένδον, *βούνδον* 'deer', *βοέντιον* 'deer's head', *Brenda*, *Brunda*, *Βρεντίσιον*, *Brundisium* 'Brindisi', Alb. *bri* 'horn', Swed. dial. *brind(e)* 'deer' (**bhrentō-s*).

Dalmaihi gen., a personal name, cf. Alb. *delmë* 'sheep'.

Damatira, *Damatyra*, *Damatras* gen. 'Demeter' (borrowing?).

deivas = L. *deus*; *deiva* (diva) = L. *dea*.

deranthoa (*daranthoa*) from **geront(i)ya* = ? Gr. *γερονία* 'senatus' (Haas).

Grahīs, *Graivaihi* gen., dat.(?) 'Γραῖς, Γραῖα, Demeter as an old woman': Gr. *γραῖς*, *γραῖα* 'old (woman)'.

²⁴ See also Pisani 1964: 233-250.

gynakhai dat., gen. (?) = Gr. *γυναῖ* (borrowing ?).
haloti = L. *saluti* (as a deity) or 'salutat' (?).
hipades 'ἀνέθνηξε' = Gr. *ἑπο-* and IE **dhē-s-t*; according to Haas, *padēs* from IE **po-dhē-s-t*.

in = L. *in*.

kalatores gen. = L. *calatoris*, cf. also Hom. *καλήτωρ* (borrowing ?).

klaohi (*klohi*) 'audi', cf. Lith. *klausyti*, L. *clueo* 'to hear, listen'.

kos 'who, someone', *kohi* 'cui' = Skt. *kaḥ*.

logetibas dat. pl., the name of a deity, cf. *Λάγροις* *θεός*, *Σιγελοί*. It is considered to be a borrowing from Gr. *λάγροις* (?).

ma 'nē' = Gr. *μή*.

Menzana(s), an epithet of the Sallentinian Jupiter to whom horses were offered as a sacrifice, cf. Alb. *mēs* (*mēz-i*), Tosc. *mēz-* 'stallion', Thrac. *Μεζην* from IE **mēdy-*.

min = Gr. *μῆν*.

Moldahias, *Moldahiaihi* gen., cf. Ven. *Moldo* (-on-?), OBG *mladū* 'young'.

nohan acc. = ? Att. *νῶς*, Dor. *νῶς*, 'temple' from **nan-Fo-s* (Pel.).

Penkahzh[e] gen. from **penkwayo-*, a derivative of **penkwe* 'five', cf. *Pompeius*; cf. also *Peukeos* gen.

οἰπια *οἰώπια*, *Μεσοάπιοι* (Hesych.), cf. OHG *gi-suifton* 'conticiscere'.

ta, *taī*, *tan* = ? Gr. *τό*, *τή*, *τήν*.

Θana, the name of a deity or a personal name, = Illyr. *Thana*, Etr. *Θana*.

-θι = Gr. *θη*, L. *et*.

Θotor, *Totor*, *Θeotor*, *Θa(o)tor-*, a personal name, a derivative of **tewt-*.

vasteos gen., *vastei* dat., *vasti* loc. = ? *ἄστυ* 'town' (Pel.).

veinan acc. from ? **swey-no-*, cf. Goth. *seins*, G. *sein* 'his'.

Venas = ? L. *Venus*.

Zis, *Zi* dat., *Zon* acc. (?) = Tarentinian *Δις*, Gr. *Ζεύς*.

On the basis of words and glosses whose meanings are well established, we can give the following as the most typical features of Messapic: IE vowels *e*, *a*, *i*, *u* (represented by *o*) are preserved; IE *o* > Messapic *a*; IE *en* > Mess. *in*.

IE *ē* > Mess. *e*, later *a* (?).

IE *ew* > Mess. *eo* > *ao* > *o* (*oi* ?); IE *ow* > Mess. *ao* > *o*; IE *aw* > Mess. *a* (?).

IE *w* was preserved but disappeared between similar vowels.

IE *l*, *r*, *n*, *s*, *d*, *t* + *y* > Mess. *ll*, *rr*, *nn*, *ss*, *dd*, *tθ*.

MA > M.

IE *dy* > Mess. *z*.

IE *s* was preserved but before and between vowels > Mess. *h*; IE *sw* > *s-* (*οἰπια*).

Gen. sing.: *-i*, in *o*-stems *-aihi*, in *yo*-stems *-ihi*; consonant stems *-as* from IE *-os*.

Accusative of *ā*-stems *-an*.

Dat. pl. *-bas* from IE *-bhos*.

Word formation: *-(i)o(v)a-* (*tabaro(v)as*, *Aproditiovas*, *Damatroivas*), probably a possessive suffix, cf. OBG *-ovū* from IE *-ewo-*, Myc. Gr. *ποτινιάφειο(ς)*, Car. *-oas*.

Messapic is often considered to be an Illyrian dialect.²⁶ According to Ribezzo (1929: 160), Devoto (1937: 266), Alessio (1951: 33), etc., it is a *satəm* language. Ribezzo (1933: 117; 1934a: 66, 110-111; 1940: 125; 1941: 141) and Bonfante (1936: 170) assumed that there might have been a more ancient *centum* substratum in Messapic. According to Kretschmer (1940-

²⁶ Cf. Krahe 1955: 12-16; de Simone 1964; Untermann 1964; Pisani 1964; 233.

43: 164), Messapic represents the Venetic layer. Haas (1962: 183-185, 183-189) is of the opinion that the antiquated views on *centum* and *satem* are not applicable to Messapic; Haas and Parlangeli (1960: 13-17) are sceptical about the Illyrian origin of Messapic.

On the basis of the most reliable data on Messapic the following conclusions can be made: Messapic has certain elements in common with Illyrian and Albanian but it also shows considerable differences, as for instance: IE *ew* > Mess. *ao* > *o*, but Alb. *e*; IE *ow* > Mess. *ao* > *o* but Alb. *a*. At the same time Messapic also has elements in common with Venetic, as well as considerable differences. As was pointed out before, Albanian is of Daco-Mysian origin but it also contains an Illyrian component (substratum). Unfortunately, Illyrian is not at all well known. It can be assumed that Messapic is a specific independent IE language with an Illyrian component as a superstratum and probably also a Daco-Mysian (= Proto-Albanian) influence. Messapic was also strongly influenced by the Greek language.

10.2.7. Sicilian

Several inscriptions from the 7th-5th centuries B. C. which were found in eastern Sicily are written in the language of the ancient *Σικελοί*, L. *Siculi*.²⁶ In these inscriptions one can find several words of IE origin, some of which seem to be related to Latin words. There are also several Sicilian glosses. Pisani (1964: 302) is sceptical about the assumption that there is an especially close relationship between Latin and Sicilian. Schmoll is inclined to accept that Sicilian ("Ausonian-Sicilian") has "an independent status between the 'Italic' languages and Illyrian" (1958: 106). He says: "Perhaps this means that we must give Ausonian-Sicilian a geographical position in the older common Balkan and eastern Alps region between (West-)Italic and Illyrian".

10.2.8. Elymian

We have known for a long time about several tens of short inscriptions on coins²⁷ from the towns of Eryx and Segesta in northwestern Sicily. The language of these inscriptions is called Elymian on the basis of the legend that "*Ελυμιοι* founded Eryx and Segesta after migrating from Troy. After analyzing the scanty data, Schmoll concluded with caution (1958: 20) "that Elymian... is closely related to an Eastern IE language group which extended from the eastern Balkan over northeast Anatolia as far as Armenia: Thracian, Trojan, Phrygian, and Armenian belonged to this group."

Since 1957, however, hundreds of sherds of votive vases have been found at excavations in the neighborhood of an ancient sanctuary at Segesta and other places. About 200 of them were inscribed and they date from the end of the 6th and the 5th century B. C. Unfortunately, almost all these inscriptions are more or less damaged. Nevertheless we now have new possibilities for establishing the position of the Elymian language.

²⁶ See Schmoll 1958: 25-29, 102-105; Pisani 1964: 293-302.

²⁷ See Schmoll 1958: 4-8.

According to Thucydides, the Elymians were Trojan colonists in western Sicily. Thucydides wrote (VI, 2): 'Ἰλίον δὲ ἀλισκομένον τῶν Τρώων τινὲς διαφυγόντες Ἀχαιοὺς πλοίοις ἀφικνοῦνται πρὸς τὴν Σικελίαν, καὶ ὁμοροὶ τοῖς Σικανοῖς οἰκήσαντες ξύμπαντες μὲν Ἑλυμοὶ ἐκλήθησαν, πόλεις δ' αὐτῶν Ἑρὺξ τε καὶ Ἑγεστα. Προσξυνώκησαν δὲ αὐτοῖς καὶ Φωκέων τινὲς τῶν ἀπὸ Τροίας τότε χειμῶν ἐς Λιβύην πρῶτον, ἔπειτα δὲ ἐς Σικελίαν ἀπ' αὐτῆς κατενεχθέντες.

The legend of the Trojan origin of the Elymians is also recorded by Pseudo-Scylax (4th century B. C.), Lycophron (3rd century B. C.), Dionysius Halicarnassensis (1st century B. C.), Virgil (1st century B. C.), Strabo (1st century B. C.—1st century A. D.), Plutarchus (1st century A. D.), and Pausanias (2nd century A. D.). Lycophron, Dionysius Halicarnassensis, and Virgil defined the region of the Elymians as Aeneas' (or Ἑλυμῖος', the son of Anchises) temporary headquarters when the Trojans moved out of Troy on their way to Rome.

Relying on Hellanicus of Lesbos (quoted by Dionysius Halicarnassensis, I, 22) who pointed out that the Elymians settled in Sicily after coming from Italy, and also on the basis of the interpretation of some proper names and inscriptions, Lejeune (1969; 1970) described Elymian as an IE idiom, a southern subgroup of Italic.

At almost the same time Ambrosini (1968-69) examined the Elymian inscriptions and described the language as Anatolian (Hittite-Luwian). Lejeune (1970: 182-183) tried to refute part of Ambrosini's suggestions as being erroneous readings (*ʷuk*, *amel*, *titel emi laiai*, *šulai*, *inal*, *enlai*, *laeal*, *daver*) or as "possible but uncertain" (*epa*, *kel*, *kim*, *tuka*, *titel*, *ini[s]*, *enlai*, *iem*, *enun*, etc.).

The position of the language of these inscriptions within the IE family can be established first of all on the basis of inscriptions on coins, especially on the basis of the fact that some of them are inscribed in Greek: *Εγεσταίων*, *Εγεσταιών*, *Σεγεσταιών*, *Ερυνκωνών*, which is the respective ethnicon in the genitive plural. Below are the Elymian texts.

ΣεγεσταζιΒ

ΣεγεσταζιΒεμ

Σεγεσταζια

Σεγεσταζις

ΕρυνκαζιΒ

ΙρυνκαζιΒ

Ερυνκωνών/ΙρυνκαζιΒ (bilingual).

Lejeune reads the letter B = *ā* and defines the suffix *-aziā* as Ital. *-āsi-a* f. Thus he translates *ΣεγεσταζιΒ εμ* 'I am Segestan [money]'. But this interpretation is in contradiction with the Greek texts in which one finds the genitive plural.

On the basis of these bilingual texts, and also on the basis of the inscription *Ταραντωνών* on a Tarentinian coin from the same period (5th century B. C.), we may conclude that the ending of these ethnic names *-αζι-a*, *-αζι-ε*, *-αζι-Β*, *-αζι-u-Β* (*B* = *ā* or *ē* according to Ambrosini) is a suffix for forming ethnic names (i. e., it is a possessive suffix) + ending for the genitive plural. Thus one comes to the following conclusion.

-αζι- = Hitt.-Luw. *-asši-*, a possessive suffix, Etr. *-āši-*, a possessive suffix and suffix for forming ethnic names.²⁸

²⁸ Cf. *CIE Velzin-āsi-a* dat. sing. 'Volsiniensi?', see Georgiev 1967a: 62; 1970-71: 1, 14-15.

-a, -ε, -ä or -ē = Hitt. -an, the ending for the genitive plural in which the nasal in final position disappeared as in Etruscan or turned into a nasal vowel (-ē), while -i-ε (respectively -i-ē) originated from -(i)ya(n) due to the influence of the preceding *i* or *y*.

As has already been pointed out, the Etruscans were of Trojan origin and their language was closely related to Hittite. It is now clear that the language of the Elymians, which is of Trojan origin as well, is also closely related to Hittite and Etruscan. The Elymians in western Sicily were actually a Trojan colony like the Etruscans in western Italy. There is therefore a historical fact in the legend about the travels of Aeneas from Troy through northwestern Sicily into Etruria.

ΣερεσάκιB εμ 'Ερεσάκιον εμ': B = -e, ä or -ē; Elym. εμ (= *emi*, *ēmi* or *enimi*) corresponds to Etr. *einī* (TLE 476)²⁹ which originates from Hitt. *eesmi* 'sum' with assimilation (and substitutional lengthening). Elym. εμ 'sum' shows that this is not an Italic dialect or language, as Lejeune suggests, because this verb has a different form in Italic: L. *sum*, Osc. *sum* and *sim*.

The Inscription on a lekythos *αται τυχαι εμ* can be translated in the following way: 'Atiae Tuchiae sum' or 'Matri Τύχη sum'.

Αται nom. or dat. f. = Etr. *Atei* from **Atai* = Hitt. *Attai*, a personal name; or dat. from Etr. *ati* 'mater'.

Τυχαι nom. or dat. f., cf. Etr. *Tuce* (CIE 4606) = Gr. Τύχη, a personal name, Τίχη, a female personal name, Τυχίος, a personal name; or *Τυχαι* dat. = Gr. Τύχη, the name of a goddess.

In some fragments the vowel *o*, the consonant *δ* (*H* = *B* is not certain), and may be also *γ* (one time) are found. It seems that part of the inscriptions are in Greek, which is not at all strange since Greek writing is found on some of the coins as well.

10.3. Armenian and Greek

Despite the fact that the original vocabulary of Armenian has changed considerably due to the many borrowings from different languages, Armenian manifests numerous exact correspondences with Greek. According to Meillet (1926a: 40; 1936a: 142) and Porzig (1954a: 155-156) these correspondences are as follows:

(1) The prothetic vowel (or laryngeal) *a* : Arm. *astl*, Gr. ἀστήρ but L. *stella* 'star'; Arm. *air* = Gr. ἀήρ but Skt. *nar* 'man', Alb. *njer* 'man'; Arm. *anun*, Gr. ὄνομα but L. *nōmen* 'name'; Arm. *atamn*, Gr. ὀδόντ- but Skt. *dant-* 'tooth' (the last two words could also have another explanation).

(2) The prothetic vowel (or laryngeal) *e* : Arm. *inn*, Gr. Ion. εἴνα-, Att. ἐνα- from **enwē* but Skt. *nava* 'nine'.

(3) Identical formation in Arm. *kanay-ke* and Gr. γυναῖ-κ-ες 'women'.

(4) Usage of IE *-bhi* as ending for the instrumental sing. in both languages.

(5) Similar formation of the locative sing.: *-oĵ* and Gr. *-οῦ*.

(6) Pres. in *-nem* and *-anem*, Gr. *-νω* and *-αρω*.

(7) The deverbative verbs in *-ow-*.

(8) Usage in both languages of the present with reduplication.

(9) Vocabulary. Frisk (GEW III: 224-228) indexes around 400 Armenian stems which have Greek correspondents. This represents a major bulk of the Indo-European vocabulary

²⁹ See Georgiev 1970-71: 2,78-79.

of Armenian. Nearly 10 per cent of these items represent Greco-Armenian isoglosses for which there are no correspondences in the other Indo-European languages. This percentage of isoglosses is very important. Here are some examples:

Arm. *ayc* = Gr. *αῖς* 'goat'.

Arm. *alam*: Gr. *ἀλέω* 'to grind'; derivatives: Arm. *aliwr*: Gr. *ἄλειρον* 'meal'; Arm. *alawri* 'mill': Gr. *ἀλειρίς* 'female slave who grinds corn'.

Arm. *ard*: Gr. *ἄρῃ* 'just, now'.

Arm. *albeur*: Gr. *φρέαρ* 'spring'.

Arm. *anurj*: Gr. *ὄνειρον* 'dream'.

Arm. *awr*: Gr. *ἡμαρ* 'day'.

Arm. *asr*: Gr. *πόκος* 'fleece'.

Arm. *arar*: Gr. *ἄραρε* 'to be fixed'.

Arm. *catr*: Gr. *γέλω* 'laughter'.

Arm. *dalar* 'becoming green': Gr. *θαλερός* 'blooming'.

Arm. *damban*, *dambaran*: Gr. *τάφος*, *τάφρος* 'grave, tomb'.

Arm. *epcem*: Gr. *ἐψω* 'to cook, boil'.

Arm. *erastankc*: Gr. *πρωκτός* 'anus'.

Arm. *erewim*: Gr. *πρόπειω* 'to be conspicuous'.

Arm. *heriwn*: Gr. *περόνη* 'buckle'.

Arm. *jiwn*: Gr. *χιών* 'snow'.

Arm. *mawru*: Gr. *μητέρα* 'stepmother'.

Arm. *sin*: Gr. *κερός*, *κενός* 'empty'.

Arm. *siwn*: Gr. *στῖον* 'column'.

Arm. *sut* 'false': Gr. *ψεῦδος* 'lie'.

Arm. *uranam*: Gr. *ἀρνεομαι* 'to deny'.

Arm. *z-genum*: Gr. *ἐννυμι* 'to dress'.

These numerous and obvious elements in common show that at some time in the past Armenian and Greek together with Macedonian and Phrygian³⁰ were spoken in neighboring regions, see section 4.7.

10.4. Indo-Iranian

The investigation of the contemporary Indic languages and dialects confirmed Sköld's (1926) and Morgenstierne's (1929) assumption that the languages from the Kafiri group, which is now essentially Hindi, are an independent branch of the Indo-Iranian group with specific phonematic changes.³¹

The problem of the so-called Proto-Indic is, however, far more important, not only because of its position between Indic and Iranian but also because of some chronological problems in common IE and its disintegration.

³⁰ On common elements in Phrygian and Armenian see Pedersen 1945: 5.

³¹ See also Burrow 1955: 32; Thumb and Hauschild 1958: 38, 53; Edel'man 1965.

10.4.1. Proto-Indic or a Specific Ancient Indo-Iranian Language

(Proto-)Indic words and proper names are recorded in texts from the Near East dating from the first half and the middle of the 2nd millennium B. C. They occur in the following texts.³²

Documents of the Kassite dynasty of Babylon (about 1750-1170 B. C.):

Šariaš, god of the sun = Skt. *sūrya-s* 'sun'.

Abirattaš = Skt. *abhi-ratha-* 'facing chariots (in battle)' or 'having a remarkable chariot'.

Documents from the Mitannian kingdom of north Mesopotamia (1500-1300 B. C.):

(a) A list of royal names (1500-1300 B. C.):

Šutarna = Skt. *Sutarṇa-*, Ved. *sutárman-*.

Paršašatar = Skt. *prasāstār-* 'ruler, director'.

Šauššatar = Skt. *Saukṣatra-* 'son of *Sukṣatra-*' ('a good ruler').

Artadāma = *Ṛtādhamā* 'the seat (the place) of which is the holy law'.

Artašumara = Skt. *Ṛtasmarā-* 'mundful of right'; etc.

(b) Private documents (including some from Syria and Palestine):

Puruša- = Skt. *Puruṣa-* 'man, manly'.

Artamanya = Skt. *Ṛtamanya-* 'thinking about the law'.

Bardašva = Skt. *Vārdhāśva-* 'son of *Vṛddhāśva-*'.

Indaruta = Ved. *Indrotá-*, Skt. *indrota-* 'helped by Indra'.

Subandu = Skt. *Subandhu-* 'having noble parents'; etc.

A treaty between the Hittite king Suppiluliuma and the Mitannian king Matiwāza (c. 1360 B. C.):

Indara = *Indra-*.

Mitraš(il) = *Mitra-*.

Našatia(una) = *Nāsatya-*.

Uruwanašš(il) = *Varuṇa-*.

Matiwāza = **Mati-vāja-* 'victorious through prayer'; etc.

A treatise on the care and training of horses (Kikkuli, 14th century B. C.):

aikawartanna = *eka-vartana-* 'one turn' (of the course).

terawartanna = *tri-vartana-* 'triple turn'.

panzawartanna = *panca-vartana-* 'quintuple turn'.

sattawartanna = *sapta-vartana-* 'septimal turn'.

nawartanna = *nava-vartana-* 'nine turns'.

Proto-Indic epithets for horses found in the texts from Nuzi: *babru-nnu* = Ved. *babhrū-* 'reddish-brown, brown', *pinkara-nnu* = Skt. *pingala-* 'yellow'; *parita-nnu* = Ved. *palitá-* 'grey'; -*nnu* is a Hurrian-Akkadian suffix.³³

The best investigation of these names is Mayrhofer's *Die Indo-Arier im Alten Vorderasien* (1966).³⁴ Kammenhuber's criticism (1968a) of it is characterized by a hypercriticism of plausible IE explanations and predilections to unconvincing anti-IE etymologies—a logical consequence of antiquated views on the original home and the disintegration of common IE.

On the basis of the names which have reliable etymologies we find the following phonological characteristic features in Proto-Indic:

³² Cf. Burrow 1955: 27-28; Belardi 1951; Hauschild 1962; Mayrhofer 1965b.

³³ Cf. Mayrhofer 1959a.

³⁴ See also Mayrhofer 1974.

IE $e > a$: *panza-* 'five' from IE **penkwe*: *assu(sanni)-* from IE **ekw(o-s)* or **eku-s*; *satta-* 'seven' from IE **septm*; *babru(nnu)-* 'brown' from IE **h₂ebhru-*; *nawa-* 'nine' from IE **newm*; (*wart-* 'to turn' from IE **wert-*); *parita(nnu)-* 'grey' from IE **pelito-*.

IE $o > a$: *Mitra-*; *Šuriaš*=Skt. *sūrya-s* 'sun' from IE **sūlyo-*; (*Tus-)**ratta-*=Skt. *rātha-* 'cart', L. *rota* 'wheel'.

IE $oy > ai$: *aika-* 'one' from IE **oyko-*.

IE $u, ū > a$: *nawa-* 'nine'; *satta-* 'seven'.

IE $l > r$: *parita(nnu)-*=Ved. *palitā-* 'grey' from IE **pelito-*; *Šuriaš*.

IE $k'(w) > s(u)$: *assu(sanni)-* from IE **ekw(o-)* or **eku-*.

IE $k(w)e, i > ca, i$: *panza-* 'five'; *Zantara-*=Skt. *candra-* 'brilliant'; *Zitra*=Skt. *citrā-* 'marvellous, remarkable'.

IE $g(w)i > ji$: *zira(nnu)-*=Skt. *jira-*.

Preservation of the antevocalic and intervocalic *s*: *Šuriaš*; *assussanni-*.

Unfortunately we do not have sufficient reliable data to establish with absolute certainty whether this is a Proto-Indic or a specific Indo-Iranian language. Nevertheless *aika*=Skt. *eka-* 'one', but Av. *aeva-* 'one', the preserved antevocalic and intervocalic *s*, as well as exact correspondences with Vedic and in general with Sanskrit, are more in support of the Proto-Indic hypothesis. Of course, the only reliable proof remains *aika-*, which is not much. In support of Iranian there is only $r > ar$ (*Artadāma*=Skt. *Rtadhamā*, *Artamanya*=Skt. *Rtamanya-*) but this can be a substitution for the alien Sanskrit phoneme r .

The Proto-Indic word *aśva-* (or **aśu-*) 'horse' was borrowed very early by some of the languages of the Near East: Hurrian *išši(ya)-* 'horse', Hitt. *assu-sanni-* 'connoisseur of horses' (Gr. *ἵππο-λόγος*)=Skt. *aśva-sāni* 'gaining horses', Assyro-Babylonian *šušānu-* 'horse-breeder'.³⁵

Šuriaš=Skt. *sūrya-s* 'sun' is found in texts from the middle of the 17th century B.C. as the Kassite name for the god of the sun.³⁶

Some Proto-Indic words such as *panza-* 'five', *aika-* 'one', etc., are found in Hittite texts from the middle of the same millennium. On the basis of the shifts $l > r$, $u > a$, $k^we > ca$ (z instead of c), $o > a$, $oy > ai$, $e > a$ the conclusion can be drawn that (the shift $k^we > ce$ occurred before the shift of e into a) a long period of time was necessary for all these shifts to take place. Thus the differentiation of Indo-Iranian presupposes the separation of Indo-Iranian from common IE before the middle of the 3rd millennium B.C. These data are of great importance for the chronology of common IE: they show that common IE existed at some very remote time and that its disintegration started much earlier than has been supposed thus far.

The fact that there are ancient Indo-Iranian borrowings in Finno-Ugrian leads to the same conclusion. Two ancient layers of borrowings from IE languages can be discerned in Finno-Ugrian. The borrowings from common IE belong to the more ancient layer. Examples:

Finn. *suola*: L. *sāl* 'salt'.

Finn. *mete-*: Skt. *mādhū*, OBG *medū* 'honey'.

³⁵ Cf. Otten 1954: 25; Mayrhofer 1959a: 87.

³⁶ Cf. Schmökel 1938: 6-7, 10-11, 20.

Finn. *nime*-: Skt. *nāman*-, OBG *imē* 'name'.

Finn. *vete*-: Goth. *watō*, OBG *voda* 'water'.

The borrowings from common Indo-Iranian belong to the second layer: there are no traces of the later changes which are typical of Proto-Iranian and Proto-Indic in these borrowings. Examples:

Finn. *sata*, Laponian *cuotte*, Mordvinian *šado*, Cheremissian *südō*, Zyryanian *šo*, Votjak *šu*, Hung. *száz* 'hundred': Skt. *śatām*, Av. *satam* 'hundred'.

Mordvinian *azoro*, *azor* 'master': Skt. *āsura*-, Av. *ahura*- 'master'.

Finn. *vasara*- 'mace': Skt. *vājra*- 'weapon of the god Indra', Av. *vazra*- 'mace'.

Finn. *porsas*: Indo-Iran. **parša*- > Khotanian *pā'sa*- 'pig'.

Finn. *oras*: Skt. *varāhā*-, Av. *varaza*- 'hog'.

Finn. *utar*: Skt. *ūdhara*, E. *udder*.

Finn. *ora*: Skt. *ārā* 'owl'.

Hung. *ostor*: Skt. *aśtrā*-, Av. *aštrā* 'whip'.

Hung. *arany*: Skt. *hiraṇya*-, Av. *zaranya*- 'gold'.

Finn. *arvo*: Skt. *arghā*- 'value, price'.

Finn. *sisar*: Skt. *svāsar*- 'sister'.

Hung. *sör* 'beer': Skt. *sūrā*-, Av. *hurā* 'strong drink'.

Finn. *sarvil*: Av. *srū*-, *sruā* 'horn'.

Hung. *vászon* 'linen': Skt. *vāsana*- 'habit'.

Finn. *mehi-läinen* 'bee': Skt. *mākṣ*- 'bee, fly', Av. *maxši* 'fly'.

Mordvinian *šava*, *šeja*: Skt. *chāga* 'goat'; etc.

The tribes who spoke Indo-Iranian and later Iranian, were at some very remote time, i. e., not later than the middle of the 3rd millennium B.C., the southern and southwestern neighbors of the Proto-Finno-Ugrians: at that time the Proto-Finno-Ugrians inhabited a very limited region near the Ural mountains in the neighborhood of the Kama River. This may be concluded from the ancient Indo-Iranian (and Proto-Iranian) borrowings in all the Finno-Ugrian languages.³⁷ At the same time Kretschmer has proved that the Proto-Indians came from the area on the Kuban River (northwest of the Caucasus, where the *Σινδοί* (*Σινδοί*; Hellenic, etc.), the ancestors of the Indians, lived in antiquity. Thus Indo-Iranian had been spoken in the southern part of the European territory of the Soviet Union since at least the middle of the 3rd millennium B.C.³⁸, and probably since much earlier.

This conclusion is confirmed by archaeological data. R. Ghirshman (1976; 1977) proved on the basis of archaeological arguments that the Proto-Indians (Indo-Aryans) split from the Proto-Iranians anywhere in S Russia before the end of the 4th millennium. Then they penetrated into Iran (in a region SE of the Caspian Sea) in the 3rd millennium where they established a high civilization and an army with mounted troops (horsemen) and battle cars. At the beginning of the 2nd millennium a part of them penetrated into Mitanni where they became the leading superstratum and another part of them reached NW India.

³⁷ Cf. Hajdu 1952-53: 271, 290; Burrow 1955: 23-24.

³⁸ Cf. also Lytkin 1953: 51, 57-58.

10.4.2. Sanskrit (Indo-Iranian) and Greek

Numerous elements in common between Sanskrit (Indo-Iranian) and Greek were established a long time ago.³⁹

Many morphemes which are identical in Sanskrit and Greek are well known and they helped the speedy development of comparative-historical linguistics during its initial period.⁴⁰ On the whole this similarity consists of the preservation of archaic features which partly or completely disappeared in the other IE languages, but there are many innovations in common between Sanskrit and Greek as well. The verbal system which is typical of both Sanskrit and Greek is rich in forms, tenses, aspects, and voices, and was probably formed before the separation of the Central and Eastern IE groups.⁴¹ Below are some of the characteristic features which the two languages have in common.

IE *y, ŋi* > *a*.

The suffix for the comparative degree Skt. *-tara-*=Gr. *-τερο-*.

The medial endings *-e=-ai* and *-te=-toi* (*-ται*).

Augmentum (also in Armenian).

The negative particle **mē-*: Skt. *mā*, Gr. *μή* (and Arm. *mi*; Alb. *mos* from **mē+*).

Vocabulary:⁴²

Skt. *irasyā* 'malevolence': Gr. *ἀσυνία* 'menaces, threats'.

Skt. *kanyā* 'girl': Gr. *καινός* 'new'.

Skt. *karbara-*, *karbura-* 'variegated, spotted': Gr. *Κέρβερος* 'the dog of hell'.

Skt. *palitā-*, f. *palikni*: Gr. *πάλινός* 'grey'.

Skt. *paraśu-*: Gr. *πέλεκυς* '(battle) ax'.

Skt. *Pūśān-*, god of the herdsmen: Gr. *Πῶν*, Arc. *Πῶωρ* from **Pāwsōn*.

Skt. *sa-hāśra-* from IE **sṃ-gheslo-*: Gr. Ion. *χέλιοι*, Aeol. *χέλλιοι*, Att. *χίλιοι* 'thousand' from IE **ghesliyo-*.

Skt. *sāras-*=Gr. *ἔλος* 'marsh, meadow'.

Skt. *svādāna-m-*: Gr. *ἡδονή* 'pleasure'.

Skt. *vacas-* = Gr. *ῥπος* 'word'.

Skt. *vāhas-* 'car': Gr. *ἔξαρκος* *ἄρμας* (Hesych.), *ὄχος* u. 'car'.

Skt. *vatsā-*, *vatsarā-*: Gr. *ἔτος* 'year'.

Skt. *zāra-*: Gr. *χόλος* 'bile'; etc.

The presence of these numerous elements in common between Indo-Iranian and Greek is clarified, when the fact of the disappearance of Macedonian, Phrygian, Daco-Mysian, and some other intermediate dialects and languages—which were the links of a chain of closely related dialects between Indo-Iranian and Greek—is taken into consideration. The proximity between Indo-Iranian and Greek was increased by yet another factor: Pelasgian, which greatly influenced Greek, was closely related to Thracian, which in turn had a close relationship with Daco-Mysian.

On the whole, Indo-Iranian is closest first to Daco-Mysian,⁴³ then to Balto-Slavic⁴⁴, and finally to Greek; it has no special relationships with the Western group⁴⁵ of the IE family, with Tocharian or Hittite-Luwian.⁴⁶

³⁹ See Benveniste 1936: 237; Deeters 1940: 297; Porzig 1954a: 157-159.

⁴⁰ Cf. Porzig 1954a: 158-159; Krahe 1954: 144; Birwé 1956.

⁴¹ See Abaev, Gornung, Guchman, Kuznecov 1956: 51.

⁴² See Porzig 1954a: 158-159.

⁴³ See sections 4.3 and 4.6.

⁴⁴ See section 8.2.

10.5. Conclusions

The relationships between the other language groups in the IE family were examined in the preceding chapters. On the basis of what has been said thus far the following conclusions can be drawn.

In the IE family there is a varying degree of relatedness among the different language groups, which may be described as follows.

In the first place comes the Indo-Iranian language unity: it originated from Proto-Indo-Iranian which broke away from the common IE language at some very remote time.

In the second place comes the Balto-Slavic language unity which originated from Proto-Balto-Slavic. The latter may seem to be less convincing than the Indo-Iranian unity, but this is only because of the fact that the Indo-Iranian group is recorded in numerous texts dating back to much more ancient times.

In the third place come Balto-Slavic-Germanic, Tocharian-Balto-Slavic, and Greek-Macedonian-Phrygian-Armenian. These groups originated from closely related dialects which were spoken during a quite remote period and which neighbored closely on each other.

In the fourth place come Western European and Balto-Slavic-Indo-Iranian: they originated from closely related dialects which were spoken within a limited territory in antiquity and which neighbored closely on each other.

⁴⁵ Cf. Burrow 1955: 14.

⁴⁶ Cf. Mayrhofer 1965a.

The Problem of the Formation of the Indo-European Language Groups and of Their Original Home

11.1. *The Nature of the Problem*

The peoples who speak Indo-European languages today live not only throughout Europe and in vast regions of Asia but also in America, Australia and in some regions of Africa. In antiquity the territory inhabited by people who spoke Indo-European languages was limited. On the basis of various information from the ancient authors it has been established that in ancient times the Indo-Europeans inhabited the greater part of Europe and some southern parts of western Asia from the Caucasus to the Himalayas, with the exception of the Arab Peninsula and Mesopotamia. There are many facts and considerations which show that the Aryans came to India from the west; they appeared in northwestern India during the first half of the 2nd millennium B. C.¹ Other data show that in very ancient times Asia (with the exception of Asia Minor) and northeastern Europe were not inhabited by Indo-European populations. The presence of non-IE languages in southwestern Europe, a remnant of which is Basque, as well as the non-IE character of the ancient toponyms from this region show that at one time southwestern and in general western Europe was not inhabited by Indo-Europeans.

Is it thus possible to more precisely establish within this vast territory the region, i. e., the original home, in which common IE — the proto-language from which the separate IE languages developed — was originally spoken?

The problem of the original home of the tribes who spoke common IE is a major question in linguistics, history, archaeology, ethnography, and sociology. It is closely related to the problem of the origin of the IE tribes and is usually called "the problem of the original home of the Indo-Europeans".

Long ago the Slavs did not inhabit as vast a territory as they do today. They began to immigrate to the Balkan Peninsula as late as the 6th

¹ Cf. Singha and Banerji 1954: 37; Burrow 1955: 30. According to Struve (1947: 51—52), the Aryans invaded India during the first half of the 3rd millennium B. C., see also Zanotti 1975; according to Renou (1956: 7), Gornung (1956: 39), and Vorobev-Desjatovskij (1956: 99) they invaded India around 1600-1500 B. C.; according to Ghirshman (1976 1977) at the beginning of the 2nd millennium B. C.

century A. D. Their settlement of their present vast territory in the Soviet Union is a historical fact. Bearing in mind the information handed down by the ancient authors, as well as linguistic considerations, archaeological and ethnographic data, it can be established that long ago the Slavs inhabited a territory approximately between the Oder and Warta Rivers and Desna and Dnieper Rivers, which extended north of the Carpathian Mountains and south of the Baltic Sea. This territory can be termed the "original home of the Slavic languages": Proto-Slavic was spoken there.

The best example of a proto-language (or common language) with an original home is provided by the history of Latin. Latin is the proto-language and Rome (and its environments) is the original home of the Romance languages. The history of Latin and of the Romance languages, which can be traced through 25 centuries, shows that Latin, which was spoken only in Rome and its environs during the middle of the 1st millennium B. C., later spread throughout Italy, France, the Iberian Peninsula, part of the Balkan Peninsula, and elsewhere due to military campaigns and migrations. During the second half of the 1st millennium B. C. different languages were spoken in the other regions of Italy, for example Oscan, Umbrian, Messapic, Greek, Etruscan, Venetic, Celtic, Ligurian, etc. But Latin imposed itself and these languages disappeared in the course of time.

The diffusion of languages takes place in two principle ways: through the natural growth of the population and through migration, on the one hand, and through the disappearance of languages and their substitution with others, on the other hand. At the time of the rise of the primitive-communal societies, languages usually spread as a result of growth and migration, but when this system began to disintegrate and the class societies took over, languages spread as a result of disappearance and substitution. Thus the contemporary Romance nations are not biological descendants of the Romans, i. e., they do not originate from division and migration. They are non-Latin peoples who had lost their own language during the period of Latinization. For this reason we can speak only about the "original home of languages" and not about the "original home of peoples".

The original home of a language does not indicate the autochthony of the population which speaks that language; it is wrong to think that certain tribes and their common language originated and developed *ab ovo* on the territory referred to as the original home of their common language. The concept of an "original home" is limited in time in the same way that the concept of a "proto-language" is limited in time. This means that at a given period of time some tribes or groups of tribes who spoke a common language inhabited a much more limited territory, than they do now. This does not exclude the possibility that the ancestors of these tribes or groups of tribes could have been allogenic. Thus the Italic tribes migrated to the region of Rome from another place and the most ancient stage of Latin was brought to Rome from elsewhere, but it was in Rome that the language which forms the basis of the contemporary Romance languages took its definitive shape.

Some linguists and archaeologists use the term "proto-nation" (Urvolk). The concepts of "proto-language" (or common language) and "proto-nation" are not correlated. A proto-language is the language of one or more tribes from which the languages of a specific group of nations later developed. The term "proto-nation" is erroneous because in the primitive-communal society there were clans, tribes, and tribal unions but not nations.

However deep we may probe into the past of the IE languages, we cannot find a complete identity in vocabulary and grammatical structure. For this reason the common language which can be reconstructed represents a unity of very closely related but not completely identical tribal dialects.

Actually the very fact of the close relationship of these dialects points to their unity at some very remote period, but at the present stage of the IE linguistics it is impossible to reconstruct this unity completely.²

The data from comparative-historical linguistics clearly show that common IE is not a fiction, that it actually existed. "Proto-IE is not a fiction, neither it is a working hypothesis, it is a real fact which has not yet been situated within the appropriate chronological and dialectal framework." This is Porzezinskij's (1914: 5) concise and clear definition of the nature of the IE proto-language. With the help of the comparative-historical method common IE could be reconstructed to a certain extent in the same way that "Proto-Romance" — which is very close to Latin — can be reconstructed on the basis of the contemporary Romance languages. As Hall (1966: 23) points out, we can reconstruct even whole "Proto-Romance" sentences which are almost identical with Latin, for instance: *Únus kértus ómo abébat múltas vákkas*.

Language appeared several hundred thousand years ago, at the same time that the first human herds appeared.³ Contemporary man existed $\pm 30,000$ years ago. Thus, PIE, as well as the proto-languages of the other language families, has a history which is many tens of thousands of years old. At the present stage of the development of linguistics there are no reliable data available for plausible arguments which could help to determine the territory in which PIE originated. Consequently, the scientific formulation of the problem of the original home of the IE languages can be defined as follows: **in what comparatively limited territory did the tribes which spoke common IE live during the last millennia before the end of the primitive communal society?**

There are concepts in linguistics which are based on erroneous premises and therefore it is necessary to specify certain guiding principles beforehand. It is known that some linguists and archaeologists, because of chauvinistic or racial speculations,⁴ have tried to prove that northern (or central) Germany and some neighboring territories were the original home of the Indo-Europeans. They maintain that the Indo-Europeans were the people who developed the so-called "corded ware" (*Schnurkeramik*) culture and on the basis of its distribution they attempt to prove that the migrations of the Indo-Europeans started from north or central Germany towards the end of the 3rd millennium B.C.⁵

² Cf. Abaev, Gornung, Guchman, Kuznecov 1956: 47-48.

³ Mankind has existed (according to approximate scientific estimates) for about one million years or much longer, see Kosven 1953: 3. Towards the beginning of the Quaternary today's animals appeared together with the most ancient type of man, who was able to live only in a milder climate.

⁴ Cf. the criticism of these assumptions by Sommerfelt 1944; 1945; Brandenstein 1956: 81; Knabe 1959: 244; A. Scherer 1968: VII-VIII.

⁵ See Hirt 1921-37: 1, 74-80 (north Germany, p. 96: "the diffusion of the Indo-Germans" between 2000-1800 B. C.); Specht 1934: 106-107; 1947: 2-6 (central and north Germany; "Schnurkeramik"); Kretschmer 1940-43: 276-277 (Thuringia, Saxony, and north

The racists maintain that specific features of language develop on the basis of the biological nature of the races.⁶ In this way they connect the origin of the separate language families with specific races and ascribe the creation of the specific structure of the "Indo-Germanic proto-language" to the so-called "Northern race". These assumptions cannot be called scientific: the relationship among the languages spoken during the last 10,000 or 20,000 years has nothing in common with biological origin, i. e., with the division of mankind into races which were mixed⁷ even in very ancient times. Seven or eight thousand years, i. e., from the Mesolithic Period to the present, is a short period compared to the history of mankind, which has lasted hundreds of thousands of years. Even at the very beginning of this period the subraces in Europe (Mediterranean, Dinaric, Alpine, Pontic, and Northern, which belong to the white European race) were to a large extent mixed so that no conclusions as to their language can be drawn on the basis of secondary somatic features.

The "corded ware" (*Schnurkeramik*) culture, the culture of painted ceramics, the culture of "ribbon ware", etc., belong to different IE tribes or groups of tribes from the 6th-3rd millennium B.C. Even before that a large part of Europe was inhabited by tribes who spoke different IE dialects and who were not familiar with ceramic making because they were primitive cattle-breeders and farmers ("pre-pottery Neolithic") and not potters.

However, the emergence of a new culture may be due not only to migrations but also to changes in the material culture of the same tribe or people as a result of the discovery of new methods for production, e. g., the development of farming, the improvement of the art of pottery making, the discovery or introduction of a new technology in copper, bronze, iron, etc.

Although chauvinistic and racist concepts are foreign to the majority of linguists and archaeologists, some aspects of this theory are nonetheless widespread. Thus, for instance, there is a very popular assumption that the IE languages separated from common IE towards the end of the 3rd millennium B. C.

The main error in many theories on the origin of the IE languages is the fact that they deal with the formation and separation of the specific

Germany; "Schnurkeramik"); Thieme 1954: 566 (the basin of the Vistula, Oder, Elba, and Weser Rivers). See also Schulz 1935: 184-185 ("northern culture" and "Schnurkeramik"; diffusion towards the end of the 3rd millennium B. C.); C. Schuchardt 1941; Kraiker 1939a: 369-379; 1939b: 115-116; see the articles by Seger (1936), Sprockhoff (1936), and Reche (1936).

⁶ Cf., for instance, Reche 1936: 312-313: "Es gibt nur eine einzige Rasse, deren Vorkommen bei allen Idg. nachzuweisen ist: die nordische. Nur die führenden politisch und kulturell schöpferischen... sind die eigentlichen Idg. als Angehörige der Nordischen Rasse, aus dem eiszeitlichen Mittel- und Westeuropa stammen... Nordische Rasse und völkisches und sprachliches Idg.-tum sind von Haus aus identisch." Similarly Schachermeyr 1936: 229; Glaesser 1939: 128: "Language as the product of social collectives which are anthropological units during a certain period reflects the spiritual-creative attitude of man towards the world and life which is determined by the character of the blood." Cf. also Hirt and Arntz 1939: 43: "spricht vieles dafür, dass sich Rassen und Sprachen jeweils gemeinsam, doch von den übrigen Arten getrennt ausgebildet haben. Mit dieser Erkenntnis wäre allen Versuchen, das Indogermanische mit artfremden Sprachen zu verknüpfen von vornherein der Boden entzogen."

⁷ Cf. Nehring 1968: 388.

languages or language groups from common IE at a very late period, usually towards the middle or even the end of the 3rd millennium B. C. New data show that this view is untenable.⁸

Hittite, whose most ancient written documents date back to the beginning of the 18th century B. C.,⁹ was at that time already a separate IE language. It had indeed preserved many archaic features but it also had a great number of innovations. It is known that the deeper we penetrate into the most remote periods of the primitive communal society, the slower we find the process of change in both the social life and the language has been; it took not hundreds but thousands of years to achieve minimal changes. Thus these changes presuppose that the process of development through which the specific languages or language groups were formed from the common language was extremely long. This conception is confirmed by many facts.

As has been shown by the analysis of the proper names recorded in Assyrian documents from the end of the 3rd millennium B. C., people who spoke Hittite-Luwian lived in eastern Asia Minor at that time. Thus the existence of Hittite-Luwian speakers in Asia Minor and the separation of Hittite-Luwian from common IE should be dated much earlier, namely in a period not later than the 3rd millennium B. C. or even earlier.

Furthermore, as we have seen (section 10.4.1), the three consecutive irreversible shifts $k^w e > ke$, $ke > \check{e}e$, $\check{e}e > \acute{e}a$, which took a long time to occur — the last shift being recorded in Proto-Indic during the 17th century B. C. — clearly show that common Indo-Iranian had existed as a separate dialect or language during the middle of the 3rd millennium B. C. at the latest. This fact is confirmed by the presence of ancient Indo-Iranian borrowings in the Finno-Ugrian languages (section 10.4). Thus Indo-Iranian was spoken in the southern part of the European territory of the USSR at least as early as the middle of the 3rd millennium B. C. and probably much earlier.

The Mycenaean documents in Linear B, which date from to the 14th-13th century B. C., revealed a specific Greek dialect. Even before this period the antevocalic and intervocalic *s* had disappeared, the voiced aspirates had shifted into voiceless, the cluster *ti* had shifted into *si*, the cluster *gy* had shifted into *z* (or *g'*, *d'* ?), the combination of *y*+vowel had changed into *z* (or *d'*, *g'*), the new endings *-ao* for the genitive singular of the *\bar{a}*-stems for the masculine and *-aōn* for the genitive plural of the feminine *\bar{a}*-stems had already appeared, etc. These changes presuppose a long history of Proto-Greek as a language which had already been separated from common IE.

Thus the IE languages have existed and developed over a period of many thousands of years. The process of the disintegration of the IE language community was very long, gradual and uneven in the different regions of the IE language territory.

⁸ Cf. Georgiev 1941: 153-154; Krahe 1943b: 30-31; Burrow 1955: 12.

⁹ Hittite (IE) personal names are found in Cappadocia as early as the 20th century B.C., cf. Goetze 1953: 277: "The linguistic appearance of these elements leaves no doubt that (Proto)-Indo-Europeans were present in Cappadocia as early as the period of Assyrian colonization, i. e., in the 20th century B. C."; 1954b. Carruba (1969) shows that in documents from the Near East there are Hittite-Luwian names which date from about 2300 (up to 1900) B. C.

11.2. *Archaeological Data*

The concept of "Indo-Europeans", i. e., of speakers of common IE, is a linguistic one: for this reason the problem of the origin and the original home of the IE languages should be examined predominantly through linguistic means and data. However, archaeology, ethnography (ethnology), ancient history, palaeontology, and anthropology can offer some useful information for finding a solution.

The original home of the Indo-Europeans must be sought in Europe. The fact that the majority of the IE languages have been found in Europe, that they are the most varied, and that they have been recorded since the most ancient times, clearly shows that their original home was in Europe.

It is known that language mixing is one of the main causes of the basic changes in the structure of a language. The more a substratum differs from a superstratum, i. e., the conquered language from the conqueror's language, the more important the change. The contemporary Indic languages are an illustration of this: they have undergone important changes; Hittite, Armenian, Irish, etc., are similar examples. The most archaic of all the IE languages still in use, Lithuanian, is spoken in Europe. This is explained by the fact that Lithuanian has developed within the boundaries of its very ancient original home (or not far from it) and has been under the influence of only those languages which are most closely related to it—Slavic and Germanic, and only to a minor degree of Finno-Ugrian. This fact is important in defining the original home of the IE languages.

There are sound reasons for assuming that during some very remote period IE tribes inhabited central and eastern Europe between the Rhine and the Don Rivers and south of the Baltic and North Seas. Western and southwestern Europe, including Italy, and northern and eastern Europe to the east of the Don River (and the lower part of the Volga River), were not included in this territory.

As can be concluded on the basis of archaeological data, this region was very scarcely populated during the Palaeolithic. At the beginning of the Quaternary the European continent was undergoing the Ice Age. During this period, which went on for hundreds of thousands of years, climatic conditions were not stable. From time to time thawing set in and the glaciers melted and receded northward. A new cold period then led to new freezing and an invasion by new glaciers. Thus four glacial invasions have been established in the territory of Poland. During the period of the greatest glacial expansion the southern boundary of the ice reached the Carpathian Mountains and contemporary Dnepropetrovsk, and to the southeast it reached the delta of the Kama River. Depending on the invasion and recession of the glaciers the surface of the earth changed. When the glacial invasions occurred, the flora and fauna which was not adapted to severe climatic conditions died and moved southward. When the glacial recessions occurred, the tundra disappeared northward and steppes and woods appeared in its place.¹⁰ Towards the end of the Palaeolithic the entire northern part of this territory was covered with ice and was most probably not inhabited or very sparsely inhabited.

¹⁰ Cf. Koroljuk, Miller, Tret'jakov, eds. 1954: 15-16.

The glaciers receded from the Baltic countries at a considerably later period: these countries were inhabited by man for the first time during the Lingby period which corresponds chronologically to the Mesolithic. Thus the appearance of man in the territory of contemporary Latvia dates back to the 8th millennium B. C.¹¹ All the settlements of the Lingby type were temporary: groups of hunters appeared in northeastern Europe for the first time and carried on a nomadic way of life.¹² In the territory of the Poles'e (a vast region in the central European part of the USSR) the most ancient population appeared during the Mesolithic and settlement in this territory continued into the Neolithic.¹³ Man appeared much earlier further south. In the territory of contemporary Czechoslovakia the first human population probably came from eastern Europe about one hundred thousand years ago.¹⁴ The region of the Don River and the northern coast of the Black Sea had not been covered with ice: man appeared even earlier in this region¹⁵ and most probably came from the south.

The Ice Age came to end about 15 thousand years ago and was succeeded by the Mesolithic. The character of the climate and of the flora and fauna began to resemble that of today. During the Mesolithic (15th-12th to the 7th-6th millennia B.C.) central and eastern Europe were scarcely populated: a few Mesolithic vestiges have been found along the north coast of the Black Sea and in some places along the middle course of the Danube River. The population became more numerous in this region at the beginning of the Neolithic from approximately the 7th-6th millennium onwards. The Neolithic reached the north much later. Thus, in the territory of Latvia the Mesolithic lasted from approximately the 8th to the 5th millennium B.C.; the population was very scarce; the transition from the Mesolithic to the Neolithic took place from the 4th to the beginning of the 2nd millennium B.C.¹⁶

The northern region of this territory was inhabited by man gradually: he came from the south, from the basin of the Danube, from the Balkan Peninsula and from the north coast of the Black Sea. The IE tribes moved roughly in this way during the Palaeolithic and Mesolithic and in part during the first part of the Neolithic. The movement, which was mainly along the rivers from south to north, resulted in the settlement of vast areas and since the settlements were predominantly from different southern regions, the dispersed groups—though preserving their features of ethnic unity—had to differentiate more and more from each other because of the great distances between their settlements.¹⁷ Only during the second half of the Neolithic and later, when these territories became more densely populated, did a movement from the north back to the south start. On the whole, during the Mesolithic and the Neolithic the

¹¹ Cf. Strazdin, ed. 1955: 5.

¹² Cf. Arcixovskij 1954: 46.

¹³ Cf. Kuxarenko 1968: 20-21.

¹⁴ Cf. Needly 1952: 30-31.

¹⁵ See Arcixovskij 1954: 35-36, 39.

¹⁶ Cf. Strazdin, ed. 1955: 6-7; Czekanowski (1957: 26) thinks that the North Germans were the most ancient settlers along the Baltic coast to the north of the Neman.

¹⁷ This was how the European part of the Soviet Union was settled; cf. Brjusov 1952: 252-260. Cf. Sommerfelt 1958: 41: "Neither in Scandinavia nor in central Europe can we look for the original habitat of the Indo-European tribes. They must have come from the southeast"; and p. 139: "the first food producers in central Europe were the Danubians...The Danubians came from the south, from Anatolia and the Mediterranean."

normal process of the dispersion of tribes and languages was achieved by settlement of vast unpopulated territories. Later, when these territories became more densely populated, this dispersion was achieved through armed occupation of foreign territory and subjugation of the populations living there.

Linguistic and social changes took place very slowly during the period of the primitive communal society. For this reason if, in a certain language, facts from the end of the primitive communal society could be established, they could also be applied to considerably more ancient times.

As has already been proved, some IE languages or language groups had already become differentiated during the 4th/3rd millennium B. C. This means that during the 4th or 5th millennia B. C. and earlier, IE tribes inhabited a vast territory in which separate IE dialects, languages or language groups were isolated and had become differentiated over a long period of time.¹⁸ There are sound reasons to believe that this vast territory was inhabited by IE tribes during the Mesolithic Period. The majority of the population in this region spoke IE languages and/or dialects. Large or small groups of non-IE tribes had probably penetrated into this territory since the most ancient times but they were assimilated and did not leave any important traces.

To the northeast of this territory the population most probably was very scanty until the 4th millennium B.C. According to Čeboksarov, Tarakanov, Terent'ev (1955),¹⁹ the particularly scarce Mesolithic population from the eastern coast of the Baltic Sea penetrated to the south from the region of the so-called Sviderian culture, however the possibility exists that separate groups of hunters and fishermen of eastern origin (Transuralians) had penetrated into the territory of the eastern Baltic coast at the same period. Later, at the turn of the 4th to the 3rd millennium B. C. new groups of hunters and fishermen appeared from the east along the eastern Baltic coast; they had developed some of the local varieties of the "comb ceramics" culture. On the whole, before the invasion of the Turko-Tartar peoples—which began during the 4th century A. D.—the southern and central part of the European territory of the USSR west of the Volga River and excluding the Caucasus was inhabited by tribes belonging to two language families: IE to the south and Finno-Ugrian (or Uralic) to the north.²⁰ This conclusion can be made on the basis of information from the ancient authors and especially from the toponyms in this territory.²¹ There are no definite traces which show that Caucasian tribes had lived to the

¹⁸ According to Kühn (1934) the Indo-Europeans had not yet become separated during the Palaeolithic and the Mesolithic, but during the Neolithic they spoke different languages. Cf. also Karstien 1939: XI-XII; Krahe 1954: 30; Paret 1948: 113-114.

¹⁹ See also Formozov 1958.

²⁰ Cf. Popov 1957: 6: "to the north of the European part of the USSR there are clear traces of Finno-Ugrian (and partly Samoyed) toponyms which speedily decrease in number to the south and then disappear, for instance, along the middle course of the Dnieper River."

²¹ The problem of the most ancient population in the region of the Volga and Oka Rivers is not very clear. On the basis of the distribution of toponyms with suffixes such as *-ma*, *-ga*, *-ša*, etc., Serebrennikov (1955) assumes that this region was inhabited by a special kind of pre-Finno-Ugrian population. Popov (1956: 150) objected to this assumption and adduced many important arguments. Cf. also Sauvageot (1958). Kalima (1951) proved the Russian origin of the toponyms with the suffixes *-ma*, *-šma* and the Slavic

west and north of the line formed by the Sea of Azov and the estuary of the Volga River.²²

Lehr-Splawiński (1946; 1954: 9-10) adduces arguments in favor of the assumption that the original home of the Slavs was in the basin (at least the southern part) of the Vistula River. However, Vasmer (1941: 14-15, 18-19) proved that the ancient toponymy and especially the hydronymy in the region extending from eastern Galicia, through Volinia, the Podolia, Kiev, Černigov, Mogilev, Poltava, Kursk, and Orel up to the upper course of the Don River, were of old Slavic origin. He drew attention to the fact that Baltic tribes lived to the north of the region inhabited by Slavs. This is evident from the presence of ancient Baltic toponymy in the region of Vilnius, Grodno, Minsk, Vitebsk, and Smolensk up to Kaluga and Možaisk. Finno-Ugrian tribes originally occupied the territory to the north and northeast of the Baltic tribes, beyond the line formed by Pskov and Moscow.

The most ancient population in the territory between the Baltic Sea and the upper course of the Volga River and in the entire region between the Baltic Sea and the Urals were most probably Finno-Ugrian tribes. On the basis of the dispersion of the "comb ceramics" culture, which seems to have been developed by Finno-Ugrian tribes, the following can be established: during the second half of the 3rd millennium B. C. Finno-Ugrian tribes who led a nomadic life as hunters and fishermen migrated to the west of the slopes of the Urals, conquered regions along the Baltic coast and penetrated as far as north of the Pripiet River.²³ These were the first more numerous non-IE tribes to penetrate from the east into the northeastern part of the original home of the Indo-Europeans. The Finno-Ugrian tribes which moved to the west were assimilated by the numerous IE tribes.²⁴ A mass penetration of Turkic peoples started much later, i. e., during the first centuries A. D.

A similar infiltration of non-IE tribes can also be assumed to have taken place to the west and the southeast.²⁵ Furthermore, in the Aegean region, during the period of the slave society — which began very early in this region — a great number of slaves were brought from different places in the Mediterranean region (the slaves in classical Athens were more numerous than the free population) and they were later assimilated.²⁶ Nevertheless, the majority of the population in this territory was of IE origin and it could quickly assimilate the tribes which spoke other languages.

origin of the names with the suffixes *-gda*, *-kma*. But this problem is not very pertinent to our investigations since, according to Serebrennikov (1955: 25), these toponyms did not propagate along the Baltic coast, and in the west they only partly reached the territory of Smolensk.

²² Cf. Vasmer 1941: 5-6, 32-33.

²³ Cf. Lehr-Splawiński 1954: 19-20.

²⁴ Some peculiarities of the Balto-Slavic languages can be explained by a Finno-Ugrian influence, as, for instance, the use of the instrumental as predicate, cf. Lehr-Splawiński 1946: 136-137; 1955: 155. The names of the *Viny*, *Lempno*, and *Lampas* Lakes and of the *Paskrža*, *Raja*, and *Sosa* Rivers are also of Finno-Ugrian origin (Lehr-Splawiński 1954: 14).

²⁵ The tribes who developed of the so-called "megalithic culture" seem to have penetrated from the west. According to Bach (1943: 6), "Riesensteingräber" are the signs of a "Wanderreligion".

²⁶ This process is reminiscent of the history of the Blacks in the United States.

A comparative-historical analysis of the vocabulary of the IE languages leads to the conclusion that the IE tribes were familiar with the following domestic and wild animals: dog, sheep, cow and ox (bull), horse, swine and pig,²⁷ goat, wolf, bear, and mouse. Furthermore, a number of IE languages record closely related names of the following wild animals, birds, insects, and trees:

Animals: fox, deer, lynx, rabbit, snake, hedgehog, tortoise, otter, and beaver.

Birds: goose, duck, pochard, eagle, hawk, crane, and blackbird.

Insects: fly, hornet, wasp, bee, louse, and flea.

Trees: birch, beech, oak, pine, willow, alder, poplar, fir, yew, and ash.

The words 'winter' and 'snow' also belong to the common IE vocabulary.

The only tree whose name can be considered to be of common IE origin is the birch. The main region in which the birch tree thrives extends from central and eastern Europe to southern Siberia. The name of the beech tree which some IE languages have in common, shows that part of the IE tribes lived in central and east Europe within the boundaries of the area in which the beech tree thrives, i. e., to the west of the line formed by Kaliningrad and the Crimea. On the basis of recent analyses of the pollen of the beech tree it was established that this tree was transferred relatively late from the south to central and north Europe: so 'the proof of the beech tree' is no longer an argument in assumptions about the original home of the Indo-Europeans.²⁸

On the basis of these data it can be concluded that in ancient times the IE tribes inhabited those territories of Europe which had a mild climate.

Man has undergone a long process of development from hunter to cattle-breeder and farmer. The presence of IE names for domestic and wild animals and the lack of common terminology for concepts which have to do with agriculture²⁹ show that the separation of the IE languages had started before the final establishment of agriculture, i. e., before the Neolithic (before the 6th millennium B. C.). This fact coincides with the data stated above. On the whole, on the basis of data derived from the vocabulary of the common IE language one can conclude that during the first half of the Neolithic the IE tribes were familiar with primitive cattle-breeding and agriculture. But after the separation from Indo-Iranian and other language groups, the connection between the remaining IE peoples was not severed and common agricultural terms could be spread.

²⁷ As Khotanese *pā'sa* 'pig' shows, the IE word **porko-s* existed at some time in Indo-Iranian but disappeared early, cf. Burrow 1955: 5. The conclusion can be drawn that the Indo-Iranians, after having settled in new regions, lost some of their linguistic terms.

²⁸ See Krogmann 1955-56.

²⁹ Cf. Schrader and Krahe 1935: 23-24, 29-30.

11.3. Hydronymic Data

11.3.1. The Origin of the Names of the Large Rivers in Central and Eastern Europe

When investigating the character of the ancient population of a given region, valuable conclusions can be made from the analysis of the hydronyms. The **names of large rivers** are especially valuable. During the time of the primitive communal society and even later settlements were often abandoned, changed or destroyed. For this reason the names of settlements cannot provide completely reliable information about the most ancient population of a region.

In his article "Flussnamen und Volkstum in der deutschen Ostmark", Steinhauser (1938) pointed out that in the eastern Alps the tributaries of the Danube River have Celtic names, their tributaries have Slavic names, and the smallest tributaries have German names. Investigation of Bulgarian hydronymy yields the following results: of the largest rivers (27 rivers more than 100 km = 62 mi. long) $\pm 70\%$ have pre-Slavic (mainly Thracian) names and only $\pm 7\%$ have Bulgarian names: however, of the middle-sized rivers (58 rivers from 50 to 100 km = 31 to 61 mi. long) $\pm 56\%$ have Bulgarian names and only $\pm 15\%$ have pre-Slavic (mainly Thracian) names.³⁰ It is known that river names are more stable than names of settlements, mountains or persons, but nonetheless this does not apply to all the river names: the most stable, i. e., names that have remained the same for the longest period of time, are the names of the large rivers which flow through larger regions. The names of large rivers are consequently the most important data for making ethnogenetic conclusions about the times for which we have no written records. For this reason all ethnogenetic analysis of a territory should rely on the investigation of hydronymy,³¹ especially of the names of the large rivers.

Thus the names of the large rivers play an important role because usually **they are preserved for a long time irrespective of population change**. All the river names in eastern and central Europe are of IE origin. We shall mention only the most important ones.

Πόντος 'Aḡevos, Black Sea. The most ancient form of this name is 'Aḡevos (Pind., Eur., Orph., etc.). It was identified with *āḡevos* 'inhospitable' through folk etymology and was renamed, due to euphemism, *Eḡevos* (Pind., Hdt., etc.) = *eḡevos* 'hospitable'. 'Aḡevos is a borrowing from Iranian or Daco-Mysian. cf. Av. *axšaēna-* 'dark, black'.³² The names Russ. *Černo more*, Bulg. *Černo more*, Rum. *Marea Neagră*, Turk. *Karadeniz* 'Black Sea' are translations of the ancient name.

Iranian tribes had lived in the region along the northern coast of the Black Sea since the most ancient times, as can be seen from the Iranian origin of the names of all the large rivers in the region.

³⁰ Cf. Georgiev 1960b: 64-80.

³¹ Cf. Rohlf's 1960: 2.

³² Cf. Vasmer 1923: 20; Abaev 1949: 158-159.

'Pā, Volga. The name 'Pā, which is recorded in Ptolemaeus (2nd century A. D.), is of Iranian origin, cf. Av. *Ranhā*, Skt. *Rasā*, names of rivers, Slav. *rosa* 'dew', *Rosica*, the name of a river, etc. The Mordvinian name *Rav*, *Ravo*, *Rava* is a borrowing from Iranian. The same river also had the (Proto-Indic) name **Oagos* = Skt. *vār(i)* n. 'water', Av. *vār* n. 'rain'. The later name *Volga* (originally probably the name of the upper course of the river) is of Slavic (or Balto-Slavic) origin, cf. Russ. *volglyj* 'humid' = Czech *Vlha*, Pol. *Wilga* names of rivers from **włga*.³³

All the names of the large rivers on the north coast of the Black Sea are of Iranian origin.

Távais, Don. The name *Távais* is recorded in Herodotus (5th century B. C.) for the first time. It originates from the Iranian word Av. *dānu-* f., Ossetan *don* 'water, river'; *T-* probably after *tavaōs* 'outstretched'.

Βορυσθένης, Δάναπρις, Dnieper. The name *Βορυσθένης* has been recorded since the time of Herodotus. This partly Hellenized name is of Iranian origin: **vouru-stāna-* (or **varu-*) 'large place, vast region' is the name for the estuary of the river, cf. Russ. *Velikij lug* 'large meadow', the name of the lower course of the Dnieper. The name *Δάναπρις* is recorded for the first time in *Anonymi Periplus Ponti Euxini*; it originates from Iran. **dānu-āpra-* (*āpra-* 'deep'), Ossetan *don-arf* 'deep river'.

Υπανις, Bug. The name of the Bug River, *Υπανις*, is recorded for the first time in Herodotus. *Υπανις* is also the name of the Kuban River, Circassian *Psyž*, a derivative of Circassian *psy* 'water'. On this basis *Υπανις* can be interpreted as a derivative from IE **up-* 'water', cf. Lith. *upė*, Lett. *upe* 'water', cf. the name of the Mysian river *Υπιος*. The name *Bug* is related to the German word *Bach* 'brook'.³⁴

Τύγης, Τύγας, Danastius, Danaster, Dniester. The name *Τύγης*, which was recorded for the first time by Herodotus, is the Iranian adjective *tūra-* 'quick, strong'. The name *Danastius* (Amm. Marc.), *Danaster* (Iord.), *Δάναστρος* (Theoph., etc.) is interpreted as Iranian **dānu-(a)stura-* = Ossetan **don-ystyr* 'big river'.

The names of the *Danube* River and its tributaries are also of IE origin; we shall examine only the names of the principle tributaries.

Ιστρος, Dānubius. The ancient name for the lower course of the Danube River, which has been recorded since the time of Hesiodus (8th century B. C.), is of Thracian origin: it is derived from IE **isaro-s* with an epenthetic *t* between *s* and *r* and is related to Skt. *iśira-* 'strong, rough', *iś-yati* 'to hurry', Dor. *ἰσρός*, Att. *ἰερός* 'strong, powerful, rough', Celt. *Isara*, the name of a river.³⁵ *Ιστρος* originates from an older name **dānu- *isaro-* 'large river'. *Dānuvius* is the Celtic name of the upper course of the same river;³⁶ *Dānavis* is the Dacian name of the lower course: these names are related to Av. *dānuš* f. 'river, stream'. Herodianus (2nd/3rd century A. D.) informs us that the Danube was called *Δάνουβις* or *Δάνουσις*: the Iranian name = Av. *dānuš* is preserved in the latter form. Stephanus Byzantius and Eustathius inform us that *Ιστρος* was called *Μαρόας* by the Scythians. Kretschmer correctly inter-

³³ Cf. Vasmer 1950-58: 216-217; Černyx 1957: 95; Thumb and Hauschild 1958: 87.

³⁴ Cf. Rozwadowski 1948: 238-239.

³⁵ Cf. Pokorny 1951-69: 299-300.

³⁶ Cf. Krahe 1954: 130.

preted this Iranian (Scythian) name as being derived from **maduvqs*, **mad-vqs*: it is related to Ved. *madati* 'boils, bubbles', L. *madeo* 'to be humid, wet'.³⁷ The Dacian name **Dānu-varī* is preserved³⁸ in the modern Rumanian name for the Danube *Dunăre*.

Πόρτα (*Πορτός*), *Prut*, a left tributary of the Danube. The name was recorded for the first time by Herodotus. It is of Iranian origin, cf. Av. *pərəbu-* 'wide', *pərətu* 'ford', Ossetian *ford* 'large river, sea'.³⁹ The ancient name is preserved in the contemporary name *Prut* which has been influenced by the Russian and Ukrainian word *prud* 'marsh' through folk etymology.

Γέρασος (Ptol.), *Gerasus* (Amm. Marc.; with γε = je), now called *Siret*, a left tributary of the Danube in Rumania. The Dacian word is related to the Pelasgian river name *Ἐρασίνος*, cf. Gr. ἀπ-εράω 'to pour, to spit' from IE **erās-* (or **eros-*), Skt. *arṣati* 'flows' (Pokorny 1951-69: 336-338). Another name of the same river appears in the contemporary name *Siret*, cf., Skt. *sarī* f. 'stream, river', *sar-* 'to hurry', Σερέτιον, the ancient name of a town in Dalmatia.

Τιάραντος, *Ἀράγος*, *Νάπαγος* are mentioned by Herodotus as important tributaries (or tributaries of tributaries) of the Danube between the Prut (*Πόρτα*) and Argeş (*Ὀρδησσός*) Rivers. Tomaschek thought that *Τιάραντος* was the ancient name of the Siret but this supposition was refuted by Detschew (1957: 503). The Dacian name for the river is = Iran. *čarant-* 'rapid'. *Ἀράγος* is related to the Celtic river name *Arar*, cf. Skt. *alarti* intensive of *ῥῆδι* 'rises, moves', *iy-ar-ti* 'starts moving', Av. *ar-* 'to start moving', Skt. *arṇa-* 'agitated', Gr. ὀρνυμι 'to move, to act'. *Νάπαγος* is of Iranian (Scythian) origin, cf. OPers. *νάπας* ἡ κοίτη ἐπὶ τῶν ὄρων τῆς Περσίδος, ἡ γέρονσα τὰ ἄποδα (i. e., τὸ νάφθα), Av. *napta-* 'humid', Skt. *snapyati* from IE **snep-* (Walde and Pokorny 1927-32: 2, 693).

Ἀλούτας (Ptol.), now called *Olt*, a left tributary of the Danube in Rumania. The name *Ἀλούτας*, later *Alutus*, Rum. *Alt*, *Olt*, which was recorded for the first time by Ptolemaeus, is of Dacian origin, cf. the names of the Lithuanian rivers *Aluotis*, *Aluotė*, Lett. *aluōts* 'spring', Iran. *Alonta(s)*, a river in the basin of the Caspian Sea.⁴⁰

All the ancient names of the rivers in Rumania are of Dacian and Iranian origin, for instance:

Νάροκος (Ap. Rh.), *Ναράκιον στόμα* (Arr.), *Ναράκιον*, the ancient name of one of the estuaries of the Danube (Sulina canal), = Old Ossetan *nārak* 'narrow' (Abaev 1949: 174).

Buzău (*Μουσεός* instead of **Μουσεός*), a right tributary of the Siret River, cf. the Thracian names *Bυζης*, *Bυζας*, *Bυζος* from Thrac. *Bυζ-*, Mod. Pers. *buz* 'goat, ram'.⁴¹

Ὀρδησσός (Hdt.), *Ordesos* (Pliny), *Ἀργεισσοσ*, *Ἀργισσοσ*, *Arges*, *Argyas* (*Arghis* 1329, 1612 A. D.), a left tributary of the Danube River in Rumania,

³⁷ Kretschmer 1935: 5-6.

³⁸ See Georgiev 1963a.

³⁹ On the origin of the names *Τάραυς*, *Βορυσθένης*, *Δάναυος*, *Ἰπτανίς*, *Τύρης*, and *Πόρτα* see Vasmer 1950-58: 74, 65-66; Kretschmer 1935: 11-12; Abaev 1949: 162, 177, 183, 185.

⁴⁰ See Rozwadowski 1948: 277; Krahe 1954: 49.

⁴¹ According to Weigand (1921: 180-181) *Buzău* is derived from Slav. (Bulg.) *Būzov* a derivative of *būzū* 'elder'. This interpretation would have been acceptable if this name had not been recorded in the pre-Slavic period, see Detschew 1957: 320.

from Dacian **ard(ž)es* (with dissimilation) originates from IE **arg-es(yo)-*, cf. the Thracian name **Aq̥zos* from **argyo-s*, Gr. ἀργεο- and ἀργός 'brilliant, white', or from IE **argent-yo-*, cf. L. *argentum*, Av. *arazata-*, OPers. *ardata-* 'silver', *Argentia*, a river name. **Oq̥d̥hosos* under the influence of **Odh̥sós*. *Vede* (*Vedea*), a left tributary of the Danube River; this name is not recorded in antiquity but its origin is pre-Slavic: it comes from IE **wed-ō[r]* 'water'.

Tib̥hosos (*Tibisia*, *Τιπήσιος*, *Τιμήσιος*, Ptol., etc.), *Timiș* (*Temes*), a left tributary of the Danube River, from IE **tib^h-*; it is related to Gr. *τιφός* n. 'marsh, bog', cf. Detschew 1957: 503-504.

Máq̥os (Hdt.), *Máq̥iosos* (Strabo), *Marus*, *Marisia*, *Μορήσιος*, *Mureș*, a left tributary of the Tisza, comes from IE **mor-is(y)o-*; see *Marus*.⁴²

**Paβón* (Ptol.), now called *Jiul*, see below.

The names of the tributaries of the Danube in Bulgaria and Yugoslavia will be analyzed below. The origin of the names of the most important tributaries of the Danube in Hungary, Czechoslovakia, Austria, and Germany are as follows.

Marus (Pliny, Tac.), now called *Morava* (G. *March*), a left tributary of the Danube River in Czechoslovakia. The name is related to L. *mare* 'sea', Anglo-Saxon *merisc* 'marsh', E. *marsh*, cf. Krahe 1954: 64, 103.

Naba (9th century A. D.), now called *Naab*, a left tributary of the Danube River in Bavaria. This name originates from IE **nob^h-ā*.⁴³

Tíos̥s, *Pathissus*, now called *Tisza*, a left tributary of the Danube River in Hungary and Yugoslavia. This name is found in several variants: *Pathissus* (Pliny), *Πάθισος* instead of *Πάθισος* or *Πάτισος* (Strabo), *Παθίσσιος* instead of *Πάτισσος*, the name of a town (Ptol.), and *Parthiscus* (Amm. Marc.) = *Pathissus*, *Tíos̥s* (*Tíyas*, Prisc.), *Tisia* (Iord.), *Tíos̥s* (Theophyl. Sim.). The initial syllable *pa-* corresponds to Slav. *po-*, Lith. *pa-*, cf. Serb. *Po-tisje* 'region along the Tisza River', Russ. *Po-volž'e* 'region along the Volga River'. Thus the name of the river was *Tíos̥s*, while the name of (the town or) the region was *Pa-t(h)is(s)us*. This name is of Dacian origin. *Tisia* comes from L.-Celt. **Ti(w)isia* from **Tib̥sya* = Dac. *Tibisia* 'Temes'.⁴⁴

**Aq̥abón*, *Naq̥abón* (Ptol.), *Arrabona*, Hung. *Rába*, G. *Raab*, Slav. *Raba*, a right tributary of the Danube River in Austria and Hungary. The name comes from IE **rab^h-*, cf. L. *rabiēs* 'anger', Skt. *rabhas-* n. 'violence, power', *rabhasa-* 'wild, angry, strong'. It is related to the name of a river in Dacia, **Paβón* (Ptol.), now called Rum. *Jiu-l*, a Slavic translation of the Dacian name: *Jiu* = Bulg. *živ*, Russ. *živoj* meaning 'quick, turbulent'.

**Evos* (Arr.), *Alvos* (Ptol.: *au* = *ε*), now called *Inn*. This name is of Celtic origin, cf. Mlr. *en* 'water' < IE **peno-*.⁴⁵

Isara, now called *Isar*, a right tributary of the Danube River in Bavaria. The name is of Celtic origin: it is derived from IE **isaro-*, cf. Thrac. **Iσ̥ar̥os*.⁴⁶

⁴² Cf. Mladenov 1915: 54; according to Detschew (1957: 288), from Thrac. *mar-* 'big' (?)

⁴³ Cf. Rozwadowski 1948: 134-135; Pokorny 1951-69: 315-316.

⁴⁴ See Georgiev 1961b: 87-88.

⁴⁵ Cf. Pokorny 1951-69: 807; Rohlf's 1960: 7.

⁴⁶ Cf. Krahe 1954: 131.

Licus (Fortunatianus), now called *Lech*, a right tributary of the Danube in Bavaria. The name is of Celtic origin, cf. the Lithuanian river names *Liëke*, *Leikā*, Lith. *ltekna* 'marsh'.⁴⁷

Ilara (1049 A. D.), now called *Iller*, a right tributary of the Danube in Bavaria at Ulm. This name is of Celtic origin (or Germanic: *Hilara*, 983 A. D. < **Elira*); it is related to the Celt.-G. *Illach* (1060 A. D., *Ilaha*; -*aha* < G. *ahwō* 'water')⁴⁸, a right tributary of the Lech River, Balto-Slav. *Ila*, a left tributary of the Gauī (Latvia) River, *Ilīja*, a tributary of the Pripet River and of the Vilija River, G. *Il-feld* (Hanover); cf. Slav. *ilū*, Russ. *il*, Gr. ἰλῦς 'slime, mud'. Cf. the river names with the suffix -*ara*: *Isara* (*Isar*, *Iser*, *Isère*), *Alara* (*Aller*), **Iscara* (*Ischer*), *Embiscara* (*Embscher*), *Visara* (*Weser*).⁴⁹ It may be assumed that the original name of this river (*Ila*, **Ilura* or **Iluris*?) was changed under the influence of the name *Isara*. Furthermore, it is possible that the older form was *Ilū-rā* (**Ilu-ri-s* **il-ara*),⁵⁰ cf. Gr. ἄλυ-υρός, ὕδαρος, etc.

The names of all other tributaries of the Danube in Czechoslovakia, Austria, and Bavaria are also of IE origin (Celtic, Venetic, Germanic, Slavic), such as *Allachbach*,⁵¹ *Cusus-Váh* (*Waag*), *Enns* (*Enisa*), *Erlaf* (*Arlape*), *Günz*,⁵² *Ilm*,⁵³ *Kamp*, *Krems*, *Laaber* (*Lapara*),⁵⁴ *Leitha* (*Litaha*), *Mindel*,⁵⁵ *Paar* (*Baraha*), *Pfatter* (*Petera*), *Regen* (*Regan*), *Riss*,⁵⁶ *Saal*,⁵⁷ *Traisen* (*Treisima*, *Trigisamum*), *Vils*, *Wien*, *Wörnitz* (*Warinza*), *Ybbs*, *Zusam* (*Zusme*), etc.⁵⁸

The names of both of the largest mountains on the lower course of the Danube, *Καρπάτης* and *Αἴμος*, are also of IE origin.

Καρπάτης, Rum. *Carpați*. The name *Καρπάτης* was recorded for the first time by Ptolemaeus (2nd century A. D.). It is of Dacian origin: *Καρπάτης* comes from IE *(s)korpā-tā 'rocky', cf. Alb. *karpë* 'rock'.⁵⁹

Αἴμος, now called Bulg. *Stara-Planina*, is recorded for the first time by Hecataeus (6th century B. C.). The ancient name is preserved in the form Bulg. *Im* and in *Emine* as the name of a cape in the eastern part of Stara Planina on the Black Sea. It is derived from PIE **sheym-*, literally 'ridge, peak, forest', and corresponds to Gr. αἰμός 'copse, thicket', Skt. *simā*, *siman-* 'plateau, peak, ridge', Ir. *sim* 'range'. The lack of initial *s* is explained by

⁴⁷ Cf. Pokorny 1951-69: 669.

⁴⁸ Cf. Schwarz 1950: 116-117.

⁴⁹ See Krahe 1954: 54.

⁵⁰ Pokorny (1925: 521; 1936: 88) supposes **Iluris*. Cf. OHG *Wisura*, G. *Weser*.

⁵¹ *Allachbach*, 8th century A. D. *Alahz*, a right tributary of the Danube at Altbarg, see Snyder 1967: 162.

⁵² *Guntia* > *Günz* from Goth. *giutian*, G. *giessen* 'to pour', OHG *giozo* 'running water', see Krahe 1961.

⁵³ *Ilm*, a right tributary of the Danube (820 A. D., *Ilma*, 1147 A. D., *Ilmina*), from **Elmina*, cf. Snyder 1967: 162.

⁵⁴ Celt. *labaros* 'chatter, noisy', see Snyder 1967: 160.

⁵⁵ A Celtic name, see Snyder 1967: 160.

⁵⁶ *Riss* (13th century A. D. *Rüssagie*), a right tributary of the Danube, cf. OHG *rlsan* 'it rains, drizzles', see Snyder 1967: 157.

⁵⁷ *Saal*, a right tributary of the Danube, cf. OPruss. *salus* 'rainy brook', see Snyder 1967: 163.

⁵⁸ Cf. Schwarz 1950: 45, 89, 106, 107, 109, 114, 117; Bach 1953-54: 2, 1: "Nicht- oder vor- idg. Namengut unter den dt. ON mit Sicherheit zu ermitteln, ist bisher nicht gelungen."

⁵⁹ Cf. Walde and Pokorny 1927-32: 2, 580.

Dečev as being an influence from Gr. *αἰὼς*. A more probable assumption is that the word was borrowed as **Saimas* from the Greek at a time when the initial antevocalic *s* in Greek was preserved, i. e., before the 15th century B. C. Later the initial intervocalic *s* of this word shifted regularly into *h* as in all other Greek words. But it can be assumed that the cluster *sh* shifted in Thracian into *h* (or *x*).

All the other names of the rivers and mountains in the territory marked as the original home of the IE tribes are also of IE origin, for instance: *Aller, Drwēnca, Dvina, Elbe, Embscher, Isla, Istra, Lahn, Leine, Lippe, Main, Nida, Notec (Netze), Oder (Odra), Ruhr, Sala, Weser*, etc.; Balto-Slavic: *Bug, Minijs, Svendrija, Vilijs*; Baltic: *Instēr, Lučesa, Nara, Sož, Upa*; Slavic: *Bebrja, Bobr, Desna, Skava, Stinawa, Tanew*, etc. Their IE origin was established long ago.⁶⁰ Šmilauer (1962: 346) has demonstrated that all pre-Slavic names of rivers in Czechoslovakia are of IE origin.

The difference between the river names of this region and the river names in western Europe is obvious and typical. While the hydronyms in central and eastern Europe are of IE origin the same cannot be said of the western European hydronyms, as for instance the names of large rivers in France and in the Iberian Peninsula: *Liger — Loire, Garumna — Garonne, Durius — Duero, Tagus — Tajo, Ἰβήρη — Iberus — Ebro*, etc. There are no reliable IE etymologies for the names of some of the largest western tributaries of the Rhine.

11.3.2. European Macrohydronymy and the Problem of the Original Home of the IE Languages

In the territory from the Rhine River to the Don River, from southern Scandinavia to the Alps and from the Baltic Sea and the Neman River to the Aegean region, there are 26 rivers which are more than 500 km (= 310 mi.) long: the Southern Bug, Western Bug, Danube, Desna, Dnieper, Dniester, Don, Donets, Drava, Elbe, Inn, Main, Mureș, Morava, Neman, Oder (*Odra*), Olt, Pripet, Prut, Rhine, Sava, Siret, Tisza, Vistula (*Visla*), Warta (*Warthe*), Weser. The conclusions that can be made on the basis of the etymology of these names are especially important because these names are not a random collection but are the names of all the largest rivers in this territory and their etymologies are well known.

Bug (Western) (775 km = 481 mi.), a right tributary of the Vistula: ORuss. *Bugŭ*, Pol. *Bug* from IE **b^howgo-s* = Skt. *bhogá-ḥ* 'curve', cf. Vasmer 1950-58, s. v.

Bug (Southern) (857 km = 535 mi.) in the Ukraine: ORuss. *Bogŭ*, Ukr. *Bog*, Pol. *Bóg, Bóh*, Middle Gr. (Const. Porph.) *Boγoŭ* from IE **b^hogo-s*, cf. OHG *bah*, G. *Bach* 'brook' from IE **b^hog-i-*, cf. Vasmer 1950-58, s. v.

Danube (2,850 km = 1,770 mi.), L. *Dānuvius* (m. after *fluvius* 'river') from Celt. **Dānuwya* (> Cymr. *Donwy*); (OBG) OSerb. *Dunavi*, Russ. *Dunáj*, etc., from Dac. **Doná(v)i(s)* < IE **Dānewyo-*, a derivative (adject-

⁶⁰ See Lehr-Splawiński 1946: 60-61; 1954: 14; Rozwadowski 1958; Schwarz 1950: 66-67; Rospond 1966.

tive) of **dānu-* 'river, stream'; Rum. *Dunăre* from Dac. **dānu-vari*. Thrac. **Ἰστρος* comes from **dānu* **isaro-* 'powerful (large) river' (Rio Grande). IE **dānu-* is an old IE word which comes from PIE **déh-(e)n-u-* and is related to Skt. *dhānṣati* 'runs, flows' from PIE **d(e)h-én-u-*, *dhandyati* 'sets in motion, runs' from PIE **d(e)h-en-éy-*, Toch. *tsän* 'to flow', etc.; see section 11.3.1.

Desna (1,187 km = 737 mi.), a left tributary of the Dnieper and the name of several other Russian rivers, is the feminine of (OBG) ORuss. *desnŭ* from IE **deksino-s* (fem. after *reka* 'river' f.), cf. Vasmer 1950-58, s. v.

Dnieper (2,285 km), Gr. *Δνᾰπείρ* from Iran. **dānu-āpra-* 'deep river' (Abaev 1958: 63), see section 11.3.1.

Dniester (1,411 km = 876 mi.), ORuss. *Dnĕstrŭ*, L. *Danastius*, *Danaster*, Gr. *Δνᾰσείρ* from Iran. **dānu-(ə)stura-* 'big river'; see section 11.3.1.

Don (1,967 km = 1,222 mi.), Gr. *Τᾰνᾰῖς* (Hdt., etc.) from Iran. (Av.) *dānuš* f. 'river, stream', cf. Skt. *dānu* n. 'liquid, drop, dew'; -*aiš* after the oblique cases as Av. -*aoš*, -*əuš*, abl. -*aot*, loc. -*āu*.

Donets (1,016 km = 631 mi.), a tributary of the Don, the diminutive of *Don*.

Drava (720 km = 447 mi.), a tributary of the Danube in Yugoslavia: L. *Dravos* (Pliny) from IE **drowo-s* 'stream' = Skt. *dravā-ḥ* 'run, quick movement; liquid', cf. Pokorny 1951-69: 205.

Elbe (1,154 km = 717 mi.), L. *Albis*, *Albia* (G. **Albi*, gen. **Albi-ōz*) from IE **alb-* 'white (river)', cf. L. *albus*, Gr. *ἄλφός* 'white', Old Norse *elfr* 'river', cf. Pokorny 1951-69: 30.

Inn (505 km = 313 mi.), Celt. **Evos* (Arr.), *Αἰνός* (Ptol.: *u* = *e*) = OIr. *en* 'water' from IE **peno-* 'marsh, bog, water; humid'.

Main (524 km = 325 mi.), Gall. *Moenus* from IE **moyno-s*, cf. Lett. *maiņa* 'marsh, bog' from IE **moynā*, Pol. *Mień*, *Mianka*, river names, cf. Pokorny 1951-69: 710.

Maros (883 km = 548 mi.), Rum. *Mureș* a river in western Rumania: *Μάρης*, *Μάριος*, L. *Marisia* from Dac. nom. **Marisis*, oblique case **Mari-sya-* < IE **morīsyo-*, a derivative of **mori* 'stagnant water, bog, lake, sea', cf. mediaeval L. *marisca* (from G.), E. *marsh*.

Morava (568 km = 352 mi.), a tributary of the Danube in Yugoslavia: Gr. *Μάργος* (Strabo), L. *Margis* (Pliny) 'border river', cf. L. *margō*, -*inis* 'end, border', G. *Mark* 'boundary, limit'. *Μάργος* is related to the Celtic river names *Morge*, *Murg*, *Morga* = Celt. *morga* 'boundary', see Lebel 1956: 291-293; Rohlf 1960: 8-10.

Neman (937 km = 582 mi.), Lith. *Nėmunas* (from which Pol. *Niemen*, G. *Memel*), the name of several rivers in Lithuania, literally '(river) flowing through forests, marshy places', cf. Lith. *nemūnė*, *nemunė* 'a kind of mushroom which grows in marshy places' from IE **nem-*, cf. Gr. *ρέμος* 'meadow', L. *nemus* 'grove, small forest', Gall. *νέμυτον*, Old Frankish *nimid* 'sacrum silvarum', see Fraenkel 1962-65, s. v.

Oder (861 km = 535 mi.), *Odagra* (892 A. D.), *Odera(m)* (940 A. D.), *Adora(m)* (968 A. D.), *Oddara* (1075 A. D.) from **Adara* < IE **ad-ro-* 'stream'. The old name (of the upper course) of the Oder *Οἶν-αδοῦας* (v. l. *Οῦιάδος*, Marcianus Heraclensis, Ptol.) comes from **ad(u)-* 'stream', cf. Pokorny 1951-69: 4. According to Much, *Οῦιαδοῦας* instead of **Οῦιαδοῦα* comes

from G. **widahwō* 'Weit-ache',⁶¹ cf. Schwarz 1950: 98-99. *Oḡu-* = *wi* may be a prefix or may come from IE **(d)wi-* 'two' (cf. Russ. *dvu-rečie* 'two rivers').

Olt (560 km = 347 mi.), a tributary of the Danube in Rumania: *Dac. *Aloúras* is related to the Lithuanian river names *Aluotis*, *Aluotė* and Lett. *aluōts* 'spring', derivatives of IE **al-*.

Pripet (787 km = 489 mi.), a tributary of the Dnieper: ORuss. *Pripetī* from **prey-peti-s* 'tributary', cf. Vasmer 1950-58, s. *v*.

Prut (950 km = 590 mi.), a tributary of the Danube: Scyth. *Πόρατα*, Gr. *Πυρετός* (Hdt.) = Avest. *parədu-* 'wide' or *parətu-* 'ford', Ossetian *fūrd*, *ford* 'big river', cf. Vasmer 1950-58, s. *v*.

Rhine (1,320 km = 820 mi.), Gall. *Rēnos* from **reyno-s* 'stream', cf. Skt. *riṇāti* 'streams, releases', *riṇa-* 'flowing', see Pokorny, 1951-69: 330.

Sava (940 km = 584 mi.), L. *Savus* (Pliny) from IE **sowo-s* (PIE **s'ew-*), cf. Gall. *Sava*, *Savara*, river names, Gr. *ῥεῖ* 'it rains', cf. Pokorny 1951-69: 922.

Siret (535 km = 332 mi.), a tributary of the Danube in Rumania, = Skt. *sarīt* f. 'brook, river', *Sarāyu-* m., a river name.

Tisza (G. *Theiss*; 997 km = 619 mi.): L. *Tisia* (Iord.) from L.-Celt. **Ti-(v)isia* < *Dac. *Tibisya-* < IE **tibh-īsyō-* 'marshy, boggy', cf. Gr. *τίφος* n. 'marsh, bog', see section 11.3.1.

Warta (G. *Warthe*; 760 km = 472 mi.) from **wortā* (or *-os*), respectively **wrtā*, belongs to Skt. *vartati* 'to turn', Lith. *vartýti* 'to turn, to whirl', OBG *vrītēti sę* 'to turn around', *vrūtiti sę* 'to turn about'. L. *vortex* 'whirl-pool'.

Visla (G. *Weichsel*; 1,124 km = 698 mi.): L. *Vistula* from IE **weys-tlā*, cf. Skt. *veṣati* 'pours', see Pokorny 1951-69: 1134; Schwarz 1950: 99.

Weser (724 km = 449 mi.): L. *Visurgis* (Mela, Pliny), *Wisara* (841 A. D.), *Visera*, *Visura* from **wis-*, cf. Skt. *veṣati* 'pours', cf. Pokorny 1951-69: 1134.

The origin of all these river names is clear: ancient IE words which mean 'water', 'river', 'stream', 'marsh', 'bog', etc., can be discerned in all of them.

1. Water, river, stream, marsh, bog:

**dānu-* 'river, stream': *Danube*, *Don*, *Donets*, *Dnieper*, *Dniester*.

**drowo-s* 'stream': *Drava*.

**sowo-s* 'river': *Sava*.

**bhogo-s* 'stream, river': (Southern) *Bug*.

**reyno-s* 'course': *Rhine*.

**serh-t* 'stream, river': *Siret*.

**moyno-s* 'course (?)': *Main*.

**prt(u)-* (?) 'big river': *Prut*.

**peno-s* 'marsh, bog, water': *Inn*.

2. Ancient derivatives:

**wis-* 'flow': *Weser*, *Vistula*.

**ad-(a)ro-* 'course': *Oder*.

**tibh-* 'marsh, bog': *Tisza*.

**mori* 'stagnant water, marsh, sea': *Mureş*.

⁶¹ At Wrocław-Breslau the *Weide* River flows into the Oder and the *Vidavka* River flows into the Warta.

**nem-* 'marshy place (forest)': *Neman*.

**al-* 'wander' > 'flow': *Olt*.

Several other ancient words are found in the following names:

3. Tributary:

**prey-peti-s* 'tributary': *Pripet*

4. Color:

**albh-yo-* 'white': *Elbe*.

5. Crooked, curve:

**bhowgo-s* 'curve, meandering': (Western) *Bug*.

**wrta* or **wortā* 'whirling': *Warta*.

6. Right (left) tributary:

**deksinā* 'right': *Desna*.

7. Border river:

**margo-s* 'border': *Morava*.

The fact that all the larger tributaries of the Danube may also be completely explained through IE is of special importance, e. g.: *Prut*, *Siret*, *Lom*, *Jantra*, *Vedea*, *Osām*, *Olt*, *Vit*, *Iskär*, *Jiul*, *Timok*, *Morava*, *Timis*, *Sava*, *Tisza*, *Drava*, *Gran*, *Váh-Waag*, *Raab*, *Leitha*, *Morava-March*, *Inn*, *Isar*, *Naab*, *Leech*, *Iller*, etc., see section 11.3.1.

Comparisons such as the following are of special importance: Thrac. **Atlas*, tributary of the Danube in contemporary eastern Bulgaria, with a consonant shift and syncope of the unstressed vowel from IE **adulā*, G. *Attel* a tributary of the Danube in Bavaria, from IE **adulyā*, Lett. *Adula*, a river in Latvia; *Almos* > *Lom*, two tributaries of the Danube in contemporary north Bulgaria, *Alm*, a tributary of the Oude Maas River in northern Brabant, *Alma*, a river in Lithuania, etc.

The majority of these names were recorded from 2000 to 2500 years ago. Since such river names are usually preserved despite ethnical changes, one may assume with a high rate of probability that they have existed at least since the Neolithic. Therefore, they show that this territory was inhabited by tribes speaking IE languages since the earliest times. All other data and considerations which can be adduced about the original home of the IE language family lead to the same conclusion.

The comparison of these hydronyms with the names of the largest rivers outside this territory clearly shows the ethnic (language) difference: to the west *Liger* — *Loire*, *Garumna* — *Garonne*, and to the east *Kama* and *Ural* cannot be interpreted as IE.

Of course, this vast territory was not shut off hermetically. Non-IE tribes penetrated into it at different times and from different directions. The main part of the population, however, consisted of tribes which spoke IE and the alien elements were quickly assimilated.

On the basis of the names of the largest rivers the following conclusion may be drawn: from the Rhine to the Don, from southern Scandinavia and Nemen to the Alps, including the Balkan Peninsula, the macrohydronymy is of ancient IE origin. This territory can thus be defined as the most ancient fatherland, the original home of the IE languages.

11.4. The Erroneousness of the Hypothesis of a Pre-IE Substratum on the Balkan Peninsula

11.4.1. The Fallacy of a Pre-IE Substratum in the Vocabulary of the Balkan Languages

The Balkan Peninsula has been inhabited by IE tribes since the earliest times. This conclusion is clearly in conflict with the theory of those scholars who place the original home of the IE languages in north Germany: but the facts do not support their theory. The erroneousness of the assertion that the southern part of the Balkan Peninsula could not have been inhabited by Indo-Europeans in earlier times is to be seen from the arguments in Thieme's *Die Heimat der indogermanischen Gemeinsprache* (1954). In this work Thieme points out that it was impossible for the southern part of the Balkan Peninsula to have been inhabited by Indo-Europeans in earliest times because plants such as the cypress, olive, grapevine and its product, wine, and animals such as the donkey, which are typical of Greece, have names which are of non-IE origin ("ihre Stammbildung... bleibt unanalysierbar. Es müssen fremde Lehnwörter sein", p. 554). This assumption is widespread but it is thoroughly groundless: it is based on views which dominated at the end of the 19th century and which were abandoned long ago. The words which Thieme considered to be non-IE are all of IE origin.

11.4.1.1. *Οἶνος, ἄμπελος, ἔλαιον, κυπάρισσος, ὄνος*

Words come into being as a result of the abstractions of the most typical distinctive features of the objects or phenomena which are to be named. In Greek there are several words for different kinds of grapevines. All of them are derived from roots meaning 'to twist, twine, creep, coil (around something)' since the most typical specific feature of the grapevine is the way it twines (creeps) around other plants or trees. Thus, for instance, *εἰλέος* 'grapevine which twines (around)', *ἐλυστα ἄμπελος μέλαινα* (Hesych.), and *ἔλινος* m. 'grapevine' come from the root **wel-*, cf. *εἰλέω* 'wind, turn round'; *νίον* = *Ῥίον* and *νίην* = *Ῥίην* 'grapevine' come from the root **wey-* 'to twine (around)'; *ἀναδενδράς* 'shoot twisting around trees'; *πυράδες ἄμπελοι* (Hesych.) is a dialect word which comes from *παραστιάς* f., literally 'something standing by something > post, pillar, column'.⁶²

οἶνος 'wine'. The IE origin of this word was actually established a long time ago⁶³ but Meillet, who was influenced by the theory that the pre-Greek population was of non-IE origin, without adducing plausible evidence, declared this word to be pre-IE.⁶⁴ This respected assertion was accepted by everyone. The main 'proof' for this thesis was that "before coming to the Mediterranean the peoples who spoke Indo-European did not know about wine."⁶⁵ Therefore, the basis of this affirmation is the aprioristic conception

⁶² Cf. Boisacq 1923: 223-224.

⁶³ Cf. Walde and Pokorny 1927-32: 1, 226.

⁶⁴ Cf. Meillet 1908-09: 161-162; 1930: 64.

⁶⁵ Meillet 1930: 64.

that the Proto-Greeks had come to Greece from northern or central Europe where the grapevine did not grow. But nobody knows where the original home of the IE languages was. It is a fact that the attempts to define it are based mainly on lexical data: if the Greek words *οἶνος* and *οἶνη* are of IE origin, then the Proto-Greeks must have inhabited a territory where the grapevine could grow.

The Greek word *οἶνη* 'grapevine (wine)' shows that the original meaning was 'grapevine' and that the difference in gender between *οἶνη* and *οἶνος* was aimed at distinguishing the plant from the product.⁶⁶ Gr. *οἶνη* 'grapevine' comes from IE **woy-na*: it has the same root as the Latin word *vitis* 'grapevine, grapes, wine' from IE **woy-ti-s* or **wey-ti-s*. The original meaning of these words is '(plant) twining around (something)'. These words are derived from the root **wey-* 'to twist, twine around': the grapevine is a plant which twines around other plants or trees. These words are related to *νῆρ' ἀμπελον* (grapevine) = *Φύρ* acc., *νῆρ' ἀναδεδράδα* acc. 'grapevine twining around trees' = *Φῶρ* from IE **wio-* and *εἰσάδες ἀμπελοι* from **Fias*, *-άδος*, cf. *οἰνάς*, *-άδος* 'grapevine, wine'. Hesychius' gloss, *νῆρ' = Φύρ* acc.

has a correspondence in the Mycenaean word *wejewē = FeiēFe(s)*, plural of *Feiēs* 'grapevine shoot' (actually the *nomen agentis* from **wey-* 'to twine around'): *Φῶρ* is the Arcado-Cyprian form for the accusative.⁶⁷ These Greek words have correspondences in the Hittite word *wiyan(a)-* 'wine' and Hier. Luw. *wa(i)ana-* 'wine'.

The Hittite word *wiyan(a)-* 'wine' corresponds to Skt. *vyana-m* 'twisting', and the Greek word *νῆρ' = Φῶρ* to Lith. *vijas* 'shoots, grapevine shoots', the Latin word *vitis* 'grapevine' to Av. *vaeiti-* 'willow, willow sprig' (Iran. *vaiti-* 'willow bough, willow', cf. also Skt. *veta-h* 'twisting water plant, reed'), while Gr. *οἶνη* 'grapevine (wine)' and *οἶνος* 'wine' have correspondences in Skt. *veṇu-h* 'reed, bamboo bough' < IE **woynū-s*, OBG *věnicī* = Lith. *vainikas* 'wreath' < IE **woyn-i-ko-s*, Russ. *venok* 'wreath', literally 'twisted', < IE **woyn-u-ko-s*, Pol. *po-wojnik* 'woodland vine' from **po-woy-iniko-s*. The basic meaning of all these words is clear: they come from the IE root **wey-* 'to twist, twine around'. Their formation is also clear from the point of view of IE word formation and they have numerous correspondences in all IE languages. Thus the assumption that these words were borrowed from some non-IE language is not tenable. The phonetical peculiarities of Arm. *gini* (< IE **woyniyo-*) and of Alb. Gegan *venë*, Toscan *verë* (< IE **woynā*) 'wine' clearly show that these words cannot be borrowings and that they were inherited from IE. L. *vinum* may be borrowed from Greek or inherited from IE.⁶⁸

Since there are numerous borrowings in Georgian from Greek, Armenian, and other IE languages, the Georgian word *gvino* is undoubtedly a borrowing from Armenian, Russian or some other IE language (cf. Arm. *gini* 'wine' from IE **woyniyo-*) and not vice versa.⁶⁹ But the Semitic word **waynu* Ar., Ethiopian *wain*, Hebrew *yayin*, Assyr. *inu*) was borrowed from Hiero-

⁶⁶ Cf. *ἐλαια*: *ἐλαιον*, L. *oliva*: *oleum*, *pirus*: *pirum*, *malus*: *malum*.

⁶⁷ See section 3.1.

⁶⁸ The Umbrian, Volscan, and Faliscan word *uinu* is probably a borrowing from Latin (or Etruscan).

⁶⁹ Cf. Deeters 1938: 139-140.

glyphic Luwian⁷⁰ or from Pelasgian-Philistinian, as is obvious from the shift *oy* > *ay* (Pel. **waynu-* or **wayna-*). It is well known that one of the main products which was exported by the Creta-Mycenaean merchants was wine.

ἄμπελος f. 'grapevine' comes from *ἄμ[φι]-πελος, literally 'plant twining around something', cf. Hom. ἄμφι-πέλομαι 'to hover, float, turn around', cf. the haplology in Hom. ἄμφιφορεὺς > Att. ἀμφορεὺς, Lac. ἄμπος from *ἄμφί-πους.⁷¹ On the formation cf. ἀνα-δενδράς 'grapevine twisting around a tree'.

Thus in Greek there are several words which either designate different kinds of grapevines or are dialectal names: ἄμπελος, ἀναδενδράς, εἰλέος, ἔλινος, ἔλυστα, οἶνη, ὑήνη, ὑόν (υ=F), *Φιάς, Φειεύς. The formation and the origin of all these words are clear from the point of view of the comparative-historical grammar of the IE languages.

ἔλαιον 'oil; fat'; the origin of the Greek words ἔλαιον 'oil; fat' and ἔλαια 'olive tree, olive', Att. ἔλαιον and ἔλαια, can be established on the basis of the Bulgarian and Russian words *masl-ina* 'olive, olive tree' which is a derivative of *maslo* 'butter, oil'⁷² and of Ar. *zaituna* 'olive' (> Span. *aceituna*), a derivative of Ar. *zait* 'oil' (> Span. *aceite*). Cf. also OE. *ele-berge*, OHG *oliberi*, literally 'oilberry'. The most typical feature of the fruit of the olive tree is that it contains oil (fat). Thus ἔλαιον 'oil; fat' with a prothetic vowel *ε* before *λ* (typical of Greek; from PIE *) is related to OBG *loi* and Lith. *lājus* 'tallow, fat' which come from IE **loy-u-* (< PIE **loy-u-*; *u*-stem).⁷³ The presence of *ai* instead of *oi* shows that ἔλαιον is a borrowing from the pre-Greek IE language (Pelasgian) in which *o* and *oy* shifted into *a* and *ay*. Pel.-Gr. ἔλαιον from IE **loy-w-o-m* has the same relationship with OBG *loi* = Lith. *lājus* < **loy-u-s* as Gr. πέλεκκον (κκ < κF) has with πέλεκυς, as λάκκος (κκ < κF) has with L. *lacūs*, and as Gr. ἰός < **iswo-s* has with Skt. *iṣu-*, etc. (-*w-o-*: -*u-*).⁷⁴

κνύαριστος f. 'cypress' is of IE origin as well. This tree is named after its odor: εὐώδης 'sweet-smelling, fragrant' is the epithet of the cypress in the *Odyssey* (V, 64). The word is related to the name of the plant Dor. κύπαιρος, Hom. κύπειρος, Ion. κύπερος, Att. κύπαιρον 'iuncus odoratus'. These words originate from IE **kup-ero-* or **kup-ero-*, **kup-er-yo-*, **kup-ar-yo-* and are related to Lith. *kūāpas* m. 'odor, aroma' < **k(ω)apo-*, OBG *koprū* 'dill' (aromatic plant) < IE **k(ω)ap-ro-s* or **kup-ro-s*, Lith. *kvepiū* 'to smell good', Gr. κάπος ψυχή, πνεῦμα (Hesych.), etc. The existence of the forms κνύαριστος (in an inscription from the 5th century B. C.), Κνύαρισία (an epithet of Artemis in an inscription from Agrothera), Κνύαριστίας (an epithet of Pan in an inscription from Lato on the island of Crete) show that κνύαριστος is a Hellenized form of the pre-Greek (Pelasgian) IE word κνύαριστος, in which IE *p* shifted regularly into *ph* = *φ* (consonant shift). Pel.-Gr. κνύαριστος probably comes from *κνύαρι-στω- or *κνύαρι-φεντα.

⁷⁰ Cf. Hier. Luw. *wa(i)ana-* 'wine'.

⁷¹ See Schwyzler 1934-39: 262-263.

⁷² Cf. Vasmer 1950-58, s. v. *maslo*.

⁷³ The IE origin of these words is indisputable, cf. Pokorny 1951-69: 664; Berneker 1908-13: 729.

⁷⁴ Pisani's assumption (1956: 65) that "the olive tree grows only along the Mediterranean coast, hence its name cannot be of IE origin" is erroneous, cf. Bulg. and Russ. *maslina* 'olive, olive tree', which is of Slavic origin.

ὄνος m. f. 'donkey, she-donkey'; the origin of this word can be established on the basis of Mod. Gr. *γομάρι* 'donkey' and *γογάκι* 'donkey', which are derived from words with the meaning of 'load', cf. Mod. Gr. *γόμος* and *γογάτιον* 'load', cf. also Ital. *somaro*, Fr. *sommier* 'pack animal' < L. *sagmarius*, a derivative of Gr. *σάγμα* 'load'. The donkey is a beast of burden. Thus Gr. *ὄνος* is of the same origin as L. *onus* 'load, weight' and Skt. *anaḥ* 'load-ing cart'. The difference is that *ὄνος* is m. and f. while L. *onus* 'load, weight' and Skt. *anaḥ* are neuter. This difference may be explained easily: the shift in gender took place in Greek under the influence of the names of other animals such as *ὄ* and *ἡ ἵππος* 'stallion' and 'mare', *ὄ* and *ἡ χοῖρος* 'pig (male and female)', *ὄ* and *ἡ ἐλαφος* 'deer (male and female)', etc. This etymology has been known for a long time and it was substantiated by Grégoire (1938: 288-289). It is only the dominant theory of the non-IE character of the pre-Greek language which has hindered linguists from accepting it. The Greek word *ὄνος* is not related to L. *asinus* but *asinus* is also of IE origin. It is known that donkeys belong to "the group of perissodactyles of the family of horses (*Equus*). They are related to the horses."⁷⁵ For this reason the name of the donkey and of the mule is often connected with the word meaning 'horse', cf. Russ. *lošak* 'mule', a derivative of *lošad* 'horse', L. *burricus* 'small horse', Span. *burro*, Ital. *brico*, Fr. *sommier*, OE. *seamere*, OHG *saumari* 'pack horse, mule', Ital. *somaro*, Skt. *aśvatara-* 'mule', a derivative of *aśva-* 'horse'.⁷⁶

Pedersen (1902: 197, 205; 1906: 404) proved that Arm. *ēš*, gen. *išoy* 'donkey' and the collective *išank* were derived from IE **ekwo-* 'horse'. Thus L. *asinus* comes from Indo-Iran. **aśv-i-na-s* < IE **ekw-ino-s*, a derivative of **ekwo-s* 'horse': it was borrowed from (Iranian or) Proto-Indic through Etruscan; for the word formation cf. Skt. *Aśv-in-au*.

The etymology of these words is clear. But even if there were any doubt as to the etymologies given no one has the right to maintain *a priori*, as Thieme did, that these words are of non-IE origin. Nobody has yet proved their origin from any of the non-IE languages. On the whole, the ardent wish of some scholars to look for the original home of the Indo-Europeans in north Germany has often been a great obstacle to the solution of many problems of IE linguistics.

The grapevine and the donkey are found throughout the Balkan Peninsula.⁷⁷ The grapevine grows throughout the Danube plain, the olive tree grows in the southern part of the Balkan Peninsula to the south of the line formed by the Istranca mountains, the Rhodope Mountains, and Albania, including the Adriatic coast; the cypress grows to the south of the Balkan Mountains. The fact that the Greeks have own ancient words for the grapevine and the donkey and that the words meaning olive and cypress are borrowed from the pre-Greek (Pelasgian) IE language shows that the Greeks inhabited the central western part of the Balkan Peninsula and some neighboring regions (northwest Greece). From there the Greeks began to penetrate into the Aegean region, beginning as early as the 3rd millennium B.C. or earlier.

⁷⁵ Bol'saja Sovetskaja Enciklopedija, 2nd ed., 31, 1955, p. 289.

⁷⁶ The suffix *-tara-* means 'slightly different', 'not real', 'kind of', 'kind of horse', cf. L. *māter-tera* 'aunt', 'something like a mother'; see Buck 1949: 173.

⁷⁷ In early times there were donkeys throughout southeastern Europe but later they were exterminated, in some cases by man. On the basis of archaeological data it was established that the wild donkey had lived in the territory of Bulgaria as early as the Palaeolithic.

Therefore there are no sound reasons for maintaining that the Balkan Peninsula was once inhabited by non-IE tribes. Some toponyms of the Balkan Peninsula were frequently declared to be pre-IE. But in reality there is no sound argument which proves the existence of pre-IE elements in this territory, i. e., that it had once been inhabited by tribes which spoke languages which were related to the Caucasian or Iberian languages. No one has yet succeeded in providing convincing examples in favor of a relationship between the ancient toponymy of the Balkan Peninsula and the toponymy of the Caucasus or the Iberian Peninsula. Single cases of homophony, as for instance the frequently quoted comparison of **Eβqos*, a river in Thrace, and **Iβqo*, a river on the Iberian Peninsula, does not prove anything. Those who compare **Eβqos* and **Iβqo* ignore the fact that the ancient name of the Thracian river has been *Eβqos*.⁷⁸ This name has no relationship with the Iberian **Iβqo* River: this is a homophony, such as, for instance, that between the *Ibrim* 'Hebrews' and **Iβqes*, a people in ancient Spain.

11.4.1.2. The Pelasgian Hydronymy

In his work *Sprache und Vorzeit* (1954: 159) Krahe wrote: "it must be said that Georgiev succeeded in explaining a part of the Aegean vocabulary as being IE-Pelasgian but the origin of the other part, namely the greater part, remains unclear even now and there continues to be suspicion of its non-IE origin." This statement is a considerable step forward for an adherent of the assumption that everything pre-Greek was non-IE. In another passage of the book Krahe stresses that the hydronymy of the Balkan Peninsula differs from the hydronymy which he calls "Old European hydronymy". The names of the rivers on the Balkan Peninsula are adduced as examples of words of non-IE origin. The error Krahe makes is due to his reconstruction of an "Old European hydronymy" on the basis of Germanic and Celtic and also due to his erroneous pan-Illyrian hypothesis. But the lexical differences among the IE languages go back to a very ancient period. The Balkan hydronymy is similar to the hydronymy of Eastern Europe and this fact is completely ignored by Krahe. The ancient hydronymy of the Balkan Peninsula is IE: it was formed from eight basic linguistic layers which often intertwine: Daco-Mysian, Thracian, Pelasgian, Greek, Macedonian, Phrygian, Illyrian, and Dalmatian, s. section 11.4.2.

The analysis of the hydronymy in the southern part of the Balkan Peninsula leads us to the conclusion that there are two basic layers in this territory: Pelasgian (more ancient) and Greek.⁷⁹ The names of the more important rivers are of Pelasgian origin:

Κηφισ(σ)ός, Dor. *Καφισ(σ)ός*, the name of nine rivers in Greece, from IE **(s)kāph-isyo-*,
 See section 5.3.

**Αχελῷος*, the name of five rivers in Greece, including the name of the largest river in ancient Greece, from IE **akw-el-* 'water', cf. the name of the Lithuanian *Akėlė* Lake, see section 5.3.

**Εἰαο-ῖνος*, the name of four (or five) rivers in Greece, from IE **(e)ros-*, cf. Skt. *rasa-h* 'juice, liquid', OBG *rosa* 'dew', Bulg. *Rosica*, the name of a river.

⁷⁸ See section 11.4.3.2.

⁷⁹ See Georgiev 1958b; 1959a; 1959b. See also section 11.4.3.1.

Ἰναχος, the name of four rivers, from IE **isn-əkṵā* 'quick water', see section 11.4.3.
Σύβαρις, the name of two rivers, from IE **su-bhori-s* 'confluens, merging'.
Ἰλίο(σ)ός, the name of two rivers, from IE **ilw-īsyō-*, cf. Gr. *ἰλὺς* 'slime'.
Γαργαρία, the name of two rivers, from *γάργα* 'poplar' and IE **ap-* 'water'.
Ἀμνῖσός from IE **ab-n-īsyō-*, cf. L. *amnis* 'river'.
Ἀδριεὺς from **lāwar-īsyō-* 'stony', cf. Gr. *λά(φ)ας* 'stone'.
Σαλμώνη from IE **salm-ōnā* 'salty water', cf. Gr. *ἄλμη* 'salty water'.

Thirty years ago almost all scholars assumed *a priori* that the Mycenaean tablets were written in a pre-IE language despite the fact that nobody had succeeded in deciphering them.⁸⁰ Decipherment demonstrated that these aprioristic assumptions were erroneous. No one is now able to claim that the Phaistos Disk was written in a non-IE language.⁸¹

It is known that when two quite different languages mix, great changes take place in the language of the conquering people. The influence of the substratum is stronger when the culture of the conquered people is higher than the culture of the conquering people. A good example of such a situation is Hittite, which has a considerable non-IE substratum. Greek is basically different in this respect because, despite the fact that the Greeks found a population in the Aegean region with a higher culture than that of the invading tribes, Greek has preserved its IE nature well. This confirms the fact that the pre-Greek population spoke an IE language⁸² which was closely related to Greek.

11.4.1.3. The Pan-Mediterranean Thesis

The Pan-Mediterranean thesis, i. e., the thesis that a pre-IE language (or related pre-IE languages) existed in the region extending from the Pyrenees to the Caucasus, may be considered to have been surpassed. In spite of this, some Romance scholars, Caucasianists, and Basquologists persist in supporting this hypothesis even now. Among them is the Romance scholar Hubschmid. Although the old arguments of the already abandoned thesis of a pre-IE substratum in the Balkan Peninsula have been proved untenable, Hubschmid, an ardent adherent of the Italian Pan-Mediterranean thesis, tried to find new evidence for this substratum. His assumptions are found in his paper "Substrate in den Balkansprachen" (1964). On the basis of his interpretation of 18 words from different Balkan languages Hubschmid assumes that there were two different pre-IE substrata in the Balkan Peninsula: (1) a "pre-Greek and pre-IE substratum" with branches to the west and to the east; (2) a "pre-Illyrian and pre-Thracian pre-IE substratum" related to "the substratum of the eastern countries, of the Alps and of the western Mediterranean region" (p. 93).

Hubschmid's argumentation is based on seven names for plants, five names for specific features of the surface of the earth, one word connected with religion and five words with various meanings. The words Hubschmid

⁸⁰ Cf. Hoffmann and Debrunner (1953) who maintain that the Creto-Mycenaean inscriptions in Linear writing are "sure to belong to the pre-Greek population".

⁸¹ The aprioristic contention about the non-IE character of this text is quite popular, cf. for instance Krahe 1954: 151, 159-160. See Georgiev 1976.

⁸² See section 3.3.

analyzed usually appear in only one Balkan language. We shall examine each word separately.

The first word Hubschmid declared to be pre-IE is Gr. *ἄπιος* 'pear (fruit)', *ἄπιος* 'pear (tree)'. This word is not found in the more ancient Greek language and not in the Greek toponymy: it is recorded for the first time in Plato (5th/4th century B. C.). In more ancient Greek and in the Greek toponymy one comes across the word *ἄχερδος* 'wild pear'. Gr. *ἄπιος* 'pear' is a cultivated plant. Cultivated plants are often imported from one country to another. Maintaining that this Greek word is of pre-IE origin is the same as considering certain Bulgarian words and their English equivalents — for example *badem* 'almond(-tree)', *domat* 'tomato', *kartof* 'potato (-plant)', *lilia* 'lily', *kukuruz* 'maize', *praskova* 'peach(-tree)', *zarzala* 'apricot(-tree)' and many others — to have been borrowed from a pre-IE language. Actually these are cultivated plants which were imported together with their names.

The Slavic word Bulg. *kruša*, Russ. *gruša*, Pol. *grusza*, dial. *krusza* 'pear', etc., which is of eastern origin (cf. Kurd. *korēši*, *kureši* 'pear'), clearly shows that *ἄπιος* 'pear' was imported into Greece from the east. This is confirmed by the correspondences this word has in some eastern languages: Gr. *ἄπιος*, -ος and L. *pirum* 'pear' come from an older **pišo-* and correspond to Burušaski (a central Asian language) *phešo* 'pear' and Hinalugian (a Caucasian language) *b'za* 'pear'.

Thus the genuine Greek name for the pear is *ἄχερδος*, which meant 'wild pear'. The name *ἄπιος* 'pear' was imported from the east together with the plant itself, as was the apricot, peach, etc. Thus this is not "a pre-IE word which indicates a non-IE pre-Greek population", as Hubschmid maintains, but an imported name of a cultivated plant.

The word *βάζανον* 'cabbage, cabbage seed', which Hubschmid adduces as an example of pre-IE in the Greek language, is found in only two papyri (PFay. and POsl.) and in the late Greek medical literature (from the time of Aëtius of Mesopotamia who lived during the 6th century A. D.). This shows that it is not an old Greek word but a late borrowing of eastern origin, probably borrowed as a medical term.

The word *κάππαρις* 'capparis spinosa' is recorded for the first time in the works of the physician Hippocrates, who lived during the 5th/4th century B. C. This plant grows in the region extending from the southern Mediterranean to India and was used as a medicine and as a spice. This word is related to Pers. *kābār*, Tadjik *kavar*, Burushaski *čopuri* 'Capparis spinosa'. Obviously, it is the name of a cultivated plant which was imported into Greece from the east: it is not a pre-IE word in Greek.

The word *κύτιος* 'Medicago arborea' is recorded in Hippocrates (5th/4th century B. C.) and Theophrastus (4th/3rd century B. C.). According to Brugmann (Boisacq 1923, s. v.), this word is of Greek origin and is related to Gr. *κύτις* 'small chest, trunk', *κύτος* 'hollow; vessel, jar', *σύντος* 'skin', etc. This word may be of Greek or pre-Greek (IE) origin, but Hubschmid's assumption that it was of Mediterranean origin is untenable. Hubschmid relies on the Spanish correspondences *codeso* (from **kutisso-*) and Asturian *cudoxo* (from **ku-tusso-*), but these are (indirect) borrowings from Greek.

The Albanian word *rrush* 'grapes', which Hubschmid adduces as pre-IE, is related to the Mod.-Gr. *ρῶγα* = *ρόγα* 'grapes'; it is a derivative with the Alb. suffix *-(u)sh*.⁸³ The Modern Greek word is related to the OGr. *ῥᾶζ*, -γός 'strawberry, grapes', L. *frāgum* 'strawberry', etc., from IE **srāg-*.⁸⁴

The Serbocroatian word *māginja* 'wild strawberry, fruit of *Juniperus sabina*' is a borrowing from a Romance language (or Latin) or from Illyrian. The initial form was *(s)māg-

⁸³ On the Albanian denominal suffix *-ush* see Xhuvani and Çabej 1962. According to Çabej (1965: 14), *rrush* is an Albanian word.

⁸⁴ See Georgiev 1965c: 78-79; Mod. Gr. *ρῶγα*, *ρόγα* is probably an old borrowing from OAlb.: IE *ā* > Alb. *o* > *u*.

-ōnia:⁸⁵ It is related to Russ. *smaga* 'flame; soot', Russ., OBG *smag-lū* 'dark, brown' from **(s)mā(w)gh(o)-*, Russ. *smuglij* 'dark-brown', Arm. *moyg* 'brown, dark', etc.; ablaut *ā(w)*, *ow*, *əw*, *ū*. The plant is named after the color of its fruit.

The Rumanian word *jup* 'juniper (L. *Iuniperus*)', variant *jep* 'Pinus pomilio', Istro-Rum. *župin* 'juniper', Lombardian *gip*, which come from **yuppo-* (variant **yippo-*), are related to the Gallic word *ioum-χέλλουσορ* 'juniper'. These words come from Latin or Celtic **yoyn-ikwo(s)-* (with syncope) and belong to the same group as L. *iūniperus* 'juniper' (Rom. also **ien-* from **iin-*), see Walde and Hofmann 1938-56, s. v. It is quite unwise to introduce a pre-IE population as an explanation for the origin of the Rumanian word when Latin *iūniperus* and Gallic **iuppos* 'juniper' offer explanations.

The dialectal (Dalmatian) Serbocroatian word *gandoj* 'hole in a rock where sea water evaporates and a salty sediment remains' is related to Brescian and Trentian (north Italy) *gana* 'hole in a rock', Raeto-Romance *gonda*, Galician *gandara* 'rocky and sandy soil'. The dialectal Serbocroatian word is undoubtedly an Italian (or Romance) borrowing and not pre-IE. The origin of the Romance word is not pertinent here.

The dialectal (Dalmatian and Montenegrin) Serbocroatian word *timor* 'rock, rocky block; rocky mountain range' comes from Rom. dlal. **tūmor*,⁸⁶ a contamination of *tumor* 'tumor, swelling' + *tūber* 'tumor, lump'.

Serbocroat. and Bulg. *čokur* are = Rum. *cioc-uri* pl. (as a collective noun) from Rum. *cioacă* 'stump'.⁸⁷ The Rumanian word is related to Ital. *ciocco* 'stump', Fr. *souche* 'trunk, stump', Basque *tšokor* 'corn cob' (a borrowing from Rom.), etc.

The Serbocroatian word *čot* 'rounded hill' is a borrowing from Rum. *ciot* 'stump knob'. The Romance word from which Rum. *ciot* comes is probably a borrowing from OHG *klot*, G. *Klotz* 'stump': *kl* > *ky-* > *č-*.

The Albanian word *magullë* 'hill' and the Rumanian word *măgură*, dlal. *măgur* (with *-r-* from an older *-l-*) 'hill' are borrowings from Slav. **magylā* > Bulg. *mogila* 'hill'. The evidence is as follows.⁸⁸

(1) The Slavic word is found in all the Slavic languages and in the toponymy of all the Slavic countries.

(2) This word is frequent in the toponymy of the entire Balkan Peninsula. Thus in southern and central Greece we find nine *Μαγούλα*, one *Μαγούλανα* (= Slav. **magylyāne*) in Arcadia, one *Μαγούλιτσα* (= Bulg. *Mogilica*) in Thessaly, etc. But such place names are not recorded on the Balkan Peninsula before the 7th century A. D., i. e., before the invasion of the Slavs.

Hubschmid's comparison of Toscan *magolo* 'crest of a furrow', Span. *majano*, Galician *mayalōn*, Genoan *maga* 'pile of stones', etc., is not convincing from either the phonetic or the semantic points of view.

The word *βαλτωλος* 'a kind of magic stone', which has been recorded since the time of Pliny (1st century A. D.), is the name of a Syrian god. Obviously this word was a borrowing from an eastern language, probably Semitic. As is known, the Greeks have borrowed Semitic religious words since very ancient times.

The Serbocroatian word *čopav* 'lame, clumsy' is connected with Meglenian *čup* 'with small ears (sheep, goat)', Ital. *zoppo* 'lame', Span. *zopo* 'lame', etc. Certainly Serbocroat. *čopav* is = Bulg. *kjopav*. These adjectives have the suffix *-av*, like Bulg. *hub-av*, *boln-av*, *kjor-av*, etc. They are Romance borrowings and come from L. *cloppus* 'lame, clumsy': L. *clo* > Rom. dial. *chio-* (= *kyo-*) > Bulg. *kjo-* (= *k'o*) > Serbocroat *čo-*.

⁸⁵ Pre-Slav. *ō* > Slav. *y* > Serbocroat. *i*, cf. L. *Rōma* > Bulg. *Rim*.

⁸⁶ L. *ū* > OSerbocroat. *y* > Serbocroat. *i*.

⁸⁷ Cf. Rum. *blan-uri*, pl. of *blană* 'skin', etc.

⁸⁸ See Georgiev 1965c: 77.

Hubschmid adds Bulg. *čip*, Serbocroat. *čib*, *čipav* to those words as also belonging to the pre-IE substratum. These adjectives are of Slavic origin: they come from IE **(s)kēypo-s*⁸⁹ and correspond to MHG *schief* 'crooked' from **skēypo-s*, Olcel. *skeifr* 'crooked' from **skoypo-s*, Anglo-Saxon *scāf*, *scāb* 'crooked', etc. The doubt Hubschmid expressed about this correspondence is ungrounded.

The Albanian word *curil* 'braid, lock' is compared to Snrselvian *tschuor* 'curly', Abruzzian *ciurri* 'curls', Fr. dial. *chourette* 'forlock (small lock of hair on the temples of a horse)' and all these words are considered to be Mediterranean pre-IE. In reality these words are of Romance and Latin origin: they come from L. *cirrus* (and **ciurrus*) 'natural curl, lock of hair'.

The Albanian word *sqap*, *cap*, *sjap*, *thjap*, *thciap*, Rum. *țap* 'ram', Slov., Čakavian *cap* 'ram', Dalmat. *zap*, Istrian, Triestan *zap*, Middle L. (10th century) *zappu*, Ukr. Pol., Czech-*cap*, Bulg. *cap* 'calling a ram' etc., are considered to be "Mediterranean pre-IE substratum". In reality these words imitate the typical sound made by the ram.⁹⁰ Such words may appear independently in most different languages, cf. for instance the name of the cuckoo, which comes from the specific sound produced by this bird. Such words cannot be defined as belonging to the substratum.

The Old Macedonian word *ἄργελλα* 'hut (for a bath)', Gr *ἄργιλλα* 'dugout', Rum. *argea* type of dugout', East Gegan (Alb.) *ragáll* 'hut' are compared by Jokl with OE *reced* 'building, house', Skt. *argala-* 'knocker'. Actually these words belong to Gr. *ἄργιλος* 'white clay' (> L. *argilla*), a derivative from *ἄργός* 'white', and therefore they are of Greek origin.

An assertion that a pre-IE substratum had existed in the Balkan Peninsula could not be considered scientifically substantiated if it is built on 18 words, the majority of which are found in only one Balkan language. At the same time, as we saw, of the 18 words adduced by Hubschmid as proof for his assertion not a single one can be defined as being pre-IE. In fact, no one has been able to adduce sound linguistic arguments for the presence of pre-IE languages on the Balkan Peninsula. All efforts in this respect are only atavisms of the antiquated and obsolete Pan-Mediterranean thesis.

11.4.2. The Hydronymy of the Northeastern Region of the Balkan Peninsula

It is necessary to give a more detailed explanation of the data on the Balkan Peninsula because this territory is very often considered to be non-IE.

The following conclusions can be made on the basis of investigations of all the river names in north Bulgaria, i. e., in the territory between the Black Sea, the Danube River, the Timok River, and the Balkan Mountains.⁹¹

(1) All the large rivers in this territory have preserved their pre-Slavic or pre-Roman (as well as pre-Celtic) names: *Lom*, *Jantra*, *Osām*, *Iskār*, *Timok*. The *Almus* — *Lom* River is one of the middle-sized rivers which has preserved its ancient name; so have the *Panega* and *Devnja* Rivers, however these names were not recorded in ancient times.

⁸⁹ Cf. Mladenov 1941: 686.

⁹⁰ Cf. Walde and Hofmann 1938-56: 157.

⁹¹ Georgiev 1955.

The pre-Roman names of two of the largest rivers have been changed: *Ogosta* (L. *Augustae*) and *Kamčija* (Turk.).

(2) Almost all the smaller and smallest rivers have Bulgarian (Slavic) names and more rarely Rumanian (in the western part of this territory) or Turkish (in the eastern part) names. This confirms the rule that with a mass change in the population the small rivers usually change their names, while the large ones preserve theirs.

(3) All the pre-Slavic and pre-Roman names are of IE origin:

Aëpas, an unknown tributary of the *Ἰστρος* 'Danube', which comes from *Ἄλιος* Mountain (Hdt.). This name is related to Gr. *ἄν-αργος* 'waterless', OPruss. *Aure*, a river name, OS cand. *aurr* 'humidity, water', *Aura*, a river in Gallia.

Ἀέσιος, a tributary of the *Ἰστρος* River. This name, as is seen from its contemporary name *Cernavoda* River, comes from **h₂-ks(e)y-* 'dark, black', cf. Av. *axšaēna-* 'dark, black' (> Gr. *Ἄξεινος*).⁹²

Ἀράννης, a southern tributary of the *Ἰστρος* River. The name of this river is related to Gr. *ἄροδο* 'to water', *ἄρδανον* 'water-pot' etc.⁹³

Ἀτίας, a southern tributary of the *Ἰστρος*, from **Adul(y)ā* = G. *Attel* (< **Adulyā*), a tributary of the Danube in Bavaria, see section 4.2.1.2.

Vīt-Utus; this name has been recorded since the 1st century B.C. (since the time of Pliny). It comes from IE **udō(r)* 'water', cf. the same root in OBG, Russ. *vydra*, Bulg. *vidra*, Lith. *ūdra* from IE **ud-rā*.⁹⁴

Devnja, a spring, a river, and a village. In ancient records this name is found in the form *Devina* which comes from IE **d^hew-inā* or **d^hew-eynā*, literally 'spring, stream, course', cf. Skt. *dhavate* 'runs, flows', *dhauti-* 'spring, stream', pre-Greek *δῶα· χοήρη·ν* 'spring' (Hesych.), *Dvina* (the name of a river) from IE **d^huw-eynā*.⁹⁵ In the northeast Bulgarian dialect the archaic form *Devina* has shifted into *Devnja* with the disappearance of the vowel after a stressed syllable.⁹⁶

Zyras (Pliny NH IV, 44), a river in Dobrudja (near Balčik), now called Batovska reka. This is a Dacian (or Thracian) name: IE **s^z-ont-s* or *s^zā*, cf. the Dacian place name *I^zgūt-^zēga*, *Deusara*, related to Skt. *sirā*, *sirā* 'stream', *sarit* f. 'brook, river', Dacian *Siret*, a river in Rumania, from **ser-*.⁹⁷ (According to Tomaschek, the name is related to Arm. *jur*, gen. *jroy* 'water'⁹⁸).

Iskär-Oïoxos, see section 11.4.3.2.

Kamčija-Panissos, *Pa(n)ysos*, *Panyusus* (Pliny), *Πάνυσ(ο)ς* (Ptol.), *Pa(n)nis(s)is*, the ancient name of the Kamčija River. It is derived from IE **poni-* 'slime, mud, marsh', cf. Goth. *fani* 'mud, slime'.⁹⁹ The name of the *Panega* River, a tributary of the *Iskär*, is of the same origin.

Lom-*Ἄλιος* (lord., Proc., etc.). *Lom* is the name of two tributaries of the Danube in Bulgaria: see section 11.4.3.2.

Λύγνος, the name of a river mentioned by Arrian which can be considered to have been a tributary of the *Ἰστρος* in the territory of the Triballians or a tributary of the

⁹² See section 4.1.

⁹³ See section 4.3.3.

⁹⁴ See section 4.3.3.

⁹⁵ See Vasmer 1950-58: 331.

⁹⁶ *-nja* instead of *-na* is of secondary origin. Mikov (1943: 136) considers this to be a derivative of *dēva* 'virgin'. The same interpretation is given by Rozwadowski (1948: 85).

⁹⁷ See Detschew 1957: 18-19.

⁹⁸ See Detschew 1957: 196.

⁹⁹ See Dečev 1960: 28.

Jantra. This name is of Daco-Mysian origin: it literally means 'slimy', cf. Lith. *liūgas* 'marsh, mud', *liūgynas* 'pool', Russ. *luža* 'pool', *Lūginas*, the name of a Lithuanian river, *Lūgas*, the name of a Lithuanian lake, *Ludza*, the Lettish name of a river, Λούγεον ἕλος the name of an (Illyrian?) marsh.¹⁰⁰

Marica, a tributary of the Enjuvica River (near Kilifarevo), a tributary of the Jantra. The name is similar to the name of a river in south Bulgaria, Greece, and Turkey: *Marica* (recorded since the 12th century A. D., Byzant. Μαρίττις). This name is of Thracian origin, cf. Anglo-Saxon *merisc* 'mud, marsh', E. *marsh*.¹⁰¹ Contemporary *Marica* in south Bulgaria was called *Ἐβρεος* in antiquity. *Marica* was originally the name of the estuary of the river, cf. *Meritus* (v. l. *Merithus*), Μηρισιός, the name of a neighboring village. Actually this is the name of a place near the estuary of the *Ἐβρεος* river.

Nōns (Hdt.), *Noas*, *Novas* (Val. Flacc.), a southern tributary of the *Ἰστρος*, probably near *Novae*, a town on the Danube between the Jantra and Osām Rivers. This name is related to the place name *Νάουος* — *Navissus*, now called *Niš*, Dor. νόα ἡ πηγὴ. *Αἰώνονες* (Hesych.), *νάω*, Aeol. *ναίω* 'to flow', Skt. *snauti* '(to) drop';¹⁰² cf. the Lithuanian river name *Nova*.

Osām-Asamus from IE **akmō(n)* 'stone' or **akmyo-* 'stony', cf. Skt. *aśman-* 'stone', see section 4.1.

Tīβρις (Hdt.), a tributary of the *Ἰστρος* (Danube), which springs from the *Αἰμός*. This name is related to *Τιβίσκος* and comes from IE **tibh-*, cf. Gr. *τῖφος* 'marsh'.¹⁰³

Timok-Timachus comes from IE **tīp-akwā* 'dark water (black)', see section 4.2.2.

Jantra-Ἀθροῦς-Iatrus, from IE **ētro-s* or **ētru-s* 'quick, turbulent', cf. OHG *atar* 'acer, sagax, celer' from IE **ētro-*, see section 4.1.

Therefore all the pre-Slavic and pre-Roman hydronyms from the territory between the Black Sea, the Danube River, and the Balkan Mountains are of IE origin, as are the names (*Πόντος*) *Ῥᾶεινος*, *Ἰστρος* 'Danube', and *Αἰμός*.

If river names such as *Jantra* and *Iskār* have been preserved for two and a half millennia despite the great ethnical changes in this territory, there is good reason to believe that they had existed at least as long before the 5th century B. C., i. e., that these names existed before the 3rd millennium B. C. Thus there is no reason to maintain that the ancient population of this territory was not of IE origin. This fact shows that this territory was inhabited by an IE population in most ancient times. If some non-IE tribes nevertheless penetrated into this territory, they were quickly assimilated by the IE population.

11.4.3. The Origin of the Names of the Largest Rivers in the Balkan Peninsula

Names of rivers, especially of the large rivers which flow through vast territories, are among the most important historical (ethnological) sources of information about those remote times for which we have no written docu-

¹⁰⁰ See Pokorný 1951-69: 686; Krahe 1954: 109.

¹⁰¹ Cf. Krahe 1947: 280. According to Detschew (1957: 208), it comes from Thrac. *mar* 'big'.

¹⁰² Cf. Dečev 1954: 217; 1957: 26.

¹⁰³ See section 11.3.1.

ments. For this reason we shall divide the Balkan Peninsula into three parts and then examine the names of the twelve largest rivers in each part: these names can clarify the ethnic layers in these regions.

In order to make convincing ethnogenetic conclusions on the basis of toponymic investigations, the interpretation of the names must be certain or at least almost certain. For this reason the problem of the criterion for interpretation is of special significance.

It is known that proper names can be easily interpreted if they have correspondences in ordinary words which can easily be understood. However, there are no such correspondences for many proper names. In such cases it is especially important to find combinatory aids for establishing their meaning, or to adduce good comparisons from other regions.

The main principles for interpretations of the hydronyms used here are the following.

(1) The existence of an ordinary word which can be found in the name of the river; thus the meaning of the following hydronyms is clear:

Greek: *Ἀλφειός* from *ἄλφός* 'white'; *Σπερχειός* from *σπέρχω* 'to haste, to be hasty'; *Ἀλιάκμων* from **w̥li-akmōn* 'rolling stones'; *Εὐρώτας* from **eūro-tās* 'mouldy', a derivative of *εὐρός*, *-ῶτος* 'mould, dank decay'.

Thracian: *Στρονμών*, cf. G. *Strom*, E. *stream*, Pol. *strumień* 'stream'.

Illyrian (?): *Dravus*, cf. Skt. *drávati* 'runs, flows'.

Celtic and Daco-Mysian: *Δανούριος*, cf. Av. *dānu-* 'river, stream'.

(2) Real translation or pseudo-translation; rivers (like all geographical objects) are usually named after a characteristic feature of the river or of its surroundings. A population which has occupied the territory of an older population borrows many of the already existent names, but it also coins proper names. However, geographical objects are named after their characteristic features so that the new names seem to be translations of the ancient names (pseudo-translations). Some of them are genuine translations made on the basis of the language of the preceding population. Examples:

A tributary of the Danube in north Bulgaria is called *Asamus*, now called *Osām*. *Asamus* is the name of a Dalmatian locality which was called *Lapida* (= *lapis* 'stone') during the Middle Ages. Both names are derived from Thracian or Daco-Mysian (respectively Dalmatian) **as(a)mu* from IE **akmō(n)* 'stone' (see section 4.1).

The tributary of the Axios River, the **Eotýwon*, is called in Bulg. *Crna (reka)* 'black river'. Thus the name **Eotýwon* comes from IE **(e)regʷ-* 'dark, black' (see section 4.1).

One of the four rivers which were called **Ivaxos* in ancient times is now called *Vistritsa*, which is a derivative of OBG *bystrŭ* 'quick'. Thus **Ivaxos* should be interpreted from IE **isn(o)-* 'quick' and **akʷā* 'water' (see section 11.4.3.1).

(3) Exact correspondences in the hydronymy of other regions which were inhabited by Indo-Europeans in ancient times, for instance:

The Pelasgian river name **Axelῶos* corresponds to the names of the *Akėlė* Lake (Lithuania), *Aquilo* (Italy), **Axélēs* or **Axélēēs* (Phrygia) River, etc., which come from IE **akʷ-el-* 'water', cf. Phryg. *ακαία, -ος* 'water'.

The river name *Margus* is the same as the Polish river name *Mroga* (IE *or, ar* > Pol. *ro*), Celt. *Morga*, etc.

The river name *Náqwon*, *Nar* is related to Pruss. *Narus*, Lith. *Naĩ-upe*, etc.

The river name *Una* (Hellenized *Οἰνός*) corresponds to the Balto-Slavic river names *Una*, *Une*, *Unia*, etc.

(4) Etymology on the basis of the most typical feature of the river, for instance:

The name of the quick mountain stream *Ἰατρὺς*, *Iatrus*, *Ieterus* now called *Jantra*, *Etär* is derived from IE **ētru-s* 'quick'; *a*, *ja*, *e* come from IE *ē*, see section 4.1.

The name of the turbulent and noisy mountain river *Τόνζος* comes from IE **(s)tund-yo-*, cf. Arm. *t̄ndium* 'noise, movement, pounding', L. *tundo* 'to beat, to pound'.

The interpretations given above cannot be considered to be certain as these in (1)-(3), but nevertheless they are quite probable.

Let us now examine the names of the largest rivers in the three main regions of the Balkan Peninsula.

11.4.3.1. The South

The 450 rivers in Greece to the south of the Haliacmon and Apsos Rivers whose names were attested in antiquity are discussed in my article "Die altgriechischen Flussnamen" (1958b and 1959b). Two ethnical layers can be discerned: Greek and Pelasgian. Furthermore there are Illyrian and Macedonian names in the north. The names of the twelve largest rivers in this territory are classified in the following way.

(a) Greek river names

Ἀλυ-άκιμων, a river in Macedonia. There is also a river with the same name in Argolis. It comes from IE **wli-akmōn* 'rolling stones'.

Ἀλφειός, a river in Arcadia and Elis, is a derivative of *ἀλφός* 'white'.

Ἀραχθός (dialect forms *Ἀραιθός*, *-θός*, *-ιός*, *Arethon*), the largest river in Epirus, comes from IE **arak-s-to-s*, cf. *ἄραξις* f. 'dashing, beating', *ἀράσσω* 'to smite, dash', *Ἀράξης*, a river in Thessaly, *Ἀραξός*, a cape in Elis.

Ἐϋήνος, a river in Aetolia: there is also a small river in Mysia which has the same name. Both names come from IE **wes-no-* with a prothetic *e* before *w* (cf. Gr. *ἔεργα*, *ἔεδνα*, etc., from **ē-Fr-*), cf. Lett. *vasa* 'humidity of the soil' from IE **wosā*, OHG *waso* 'humid soil, marsh', Gr. *ἑαρόν* *λουτήρα ἢ πρόχον* (Hesych.) from **wes-aro-*. The name may be Greek or Pelasgian; the name *Ἐϋήνος* from Asia Minor may be Mysian, Phrygian or Greek.

Ἐϋρώτας, a river in Laconia, is derived from **έρωτ-ās* 'muddy' or 'mouldy, rusty', a derivative of *εὔρωτος*, gen. *-ώτος* 'mould, dank decay'. For the name compare the Bulgarian river names *Răždava*, *Răždavica* from *răžda* 'rust'.

Πηνειός, a river in Thessaly and Elis. The name is related to the OBG *pēna* 'lather', *pēniti se* 'to lather', *pēnlnū* 'lathery', cf. the river name *Pena* (east Macedonia and the Ukraine), *Penaka*, a spring in western Bulgaria.

Σπερχειός, a river in Thessaly, cf. *σπερχω* 'to haste', *σπερχνός* 'hasty, hurries'.

(b) Pelasgian (pre-Greek) river names

Pelasgian was the pre-Greek IE language in the Aegean region. Its main specific feature was a consonant shift like that in Armenian and Germanic. Pelasgian names of rivers and localities are found throughout Greece and extend to the north as far as *Ἀχελϋός-Πηνειός*.

**Ivaxos* is the name of four rivers in Argolis, Boeotia, Aetolia, and southern Thessaly (or Ainis). One of these rivers is now called *Vistritsa*: this name is Bulgarian and means 'quick (river)'. This can be used as a point of departure in explaining the ancient name: **Ir-axos* (with *i*; -os after ποταμός) comes from IE **isn-akwā* 'quick water', a compound word from IE **isn(o)-*, cf. Skt. *iṣṇāti* 'sets in motion, swings', Gr. *iráo*, *iréō* 'to carry off', and IE **akwā* 'water'.

**Λγελῶς*, a river which flows between Aetolia and Acarnania, is the largest river in ancient Greece; four other rivers in Arcadia, Achaea, Ainis, and on the island of Mykonos have the same name. **Λγελῶς* (-όιος), in the expression ὁ **Λγελῶς ποταμός*, comes from an older **Λγελω*, a derivative of **akw-el-* 'water', cf. the Phrygian river name **Λγέλης*, **Ακέλης*, Phryg. *ακαλα* 'water', Lith. *Akėlė*, a lake name, L. *Aquilo*, Venetic *Aquileia*.

Κηφισ(ο)ός, Dor. *Καρίσός* is the name of eight rivers and a spring in Phocis (twice), Attica, Eleusis, Sikyonis, Argolis, in Apollonia near Epidaurus, and on the islands of Salamis and Scyros. See section 5.3 for their etymology. The suffix -*īs(y)o-*, which is used to form place and river names is known from Baltic, Slavic,¹⁰⁴ etc.

(c) Illyrian (or Greek) river names

**Απος*, *Apsus*, Byzant. **Ασοων*, now called *Osum* (the upper course) and *Semeni* (the lower course), a river in Albania, is related to the river names *Abs* (Schleswig), *Apsa* (Italy), *Asse* (France) from **Apsā*. It is a derivative of **āp-* 'water, river'. The contemporary Bulg. form of the name *Osām* comes from **Apsōn(em)*: *a > o*, *ps > s*, *ō > u* and *n > m* are Slavic phonetic changes. *Semeni* also comes from **Apsōn-*: the disappearance of initial *a*, *ps > s*, *ō > e* are Albanian phonematic changes; *i* is the Albanian post-positive article.

**Αῖος*, also *Αἶας*, gen. *Αἶαντος*, now called Alb. *Vijos*, a river in Albania and in Epirus. The name also appears in the form *Αἶος* and **Αἶα* (dat.) instead of *Αἶα*. Furthermore, a tribe living along this river was called *Ἰαγ-αναῖτοι*. Therefore, **Αῖος* in the expression ὁ **Αῖος ποταμός* comes from **A(F)ω* (as **Λγελῶς* from **Λγελω*, see above); *Αἶαντος* is used instead of **Αἶαντος*. The original form was nom. **awo(nts)*, gen. **awyt-es* (IE *ŋ >* Illyr. *an*). This name is related to the river names *Ave* (Sabinia), *Avanti* (India) as well as to the Lett. *avuōts* 'spring' (IE **awonto-s*), Skt. *avani-* 'river bed; course, river'.

The names of the 12 largest rivers in the southern part of the Balkan Peninsula are therefore of IE origin.

11.4.3.2. The East

The approximately one hundred river names to the east of the Axios and Margos (now called Vardar and Morava Rivers) that are attested from antiquity may be classified into two main layers: one, the Thracians layer, is more ancient (the chief characteristic feature being the consonant shift) and the other, the Daco-Mysian layer, is more recent. Below are the names of the twelve largest rivers in this region:

**Αἶος*, *Iatrus*, *Ieterus*, now called *Jantra* and *Etar* (the upper course), a tributary of the Danube; its upper course being a quick mountain river, its name comes from IE **etru-s* or **etro-s* 'quick', cf. OHG *atar* 'quick' from **ētro-s*, Lith. dial. *ātrus* 'quick, turbulent', Lett. *atrs* 'quick, nimble, turbulent' from **etru-s* (see section 4.1).

**Αλμος*, *Almus*, now called *Lom*. Today two tributaries of the Danube in north Bulgaria have this name and the larger tributary (the eastern one) is called *Rusenski Lom*. The name **Αλμος* for the western Lom is recorded in ancient times. The name of the

¹⁰⁴ See Duridanov 1959: 218-219.

eastern river is of the same origin. Cf. the river names *Alm* (Netherlands), *Alma* (Norway), *Almajā* (Lithuania), etc.¹⁰⁵

**Aq̥os* now called *Arda*, a tributary of the *Marica* (Hebros) River. Since the upper course is called Bulg. *Bjala reka*, Turk. *Akdere* 'white river', *Arda* comes from Thrac. **arda*- < IE. **arg(o)*- 'brilliant, white', cf. the Thracian toponym *Aq̥os* from *arg*-; IE *g*' > Thrac. *z* or *d*.

Asamus, Byzant. **Oσμος*, now called *Osām*, a tributary of the Danube. See section 4.1.

**Eβqos* (Hdt., etc.), *Hebrus*, *Ebrus*, now called *Marica*. There is also a **Eβqos* River in Illyria. **Eβqos* is preserved today in the name of the upper course, *Ibār*, and in the name of the village situated not far from the middle course of the *Marica*, *Po-ibr-ene*, literally 'those living along the river *Ib(ā)r*'. The earliest recorded form of the name of the Thracian river is *Eβqos* (Alcman, 7th-6th century B. C.). IE *wr* shifted in Thracian into *br* (or *vr*), cf. Thrac. *βqia* 'town' from IE **wri(y)ā*. Thus Thrac. *Eβqos* = **Eβqos* can be derived from IE **ewru-s* = Gr. *εὐρύς* 'wide'.

The present name of the *Marica* (Maritsa) River comes from the name of a place in the neighborhood of the estuary of the river recorded in antiquity as *Merit(h)us*, *Μηριτός*, *Μήριτος*, a derivative of IE **mor(i)*- 'marsh, sea'; cf. the river names *Μάριτος*, now called Hung. *Maros*, Rum. *Mureș*.

**Eργῖνος*, *Erginos*, **Eργῖνας*, **Eργῖων* (also **Αργιάρης*, Byzant. **Πυγνία*, Turk. *Ergene*), a tributary of the *Marica* River in Turkish Thrace. **Eργῖων* is also the name of a tributary of the *Axios* (Vardar) River, now called *Crna* 'black (river)': thus **Eργῖων*, **Eργῖνος* comes from *(e)*regw-ōn*- and *(e)*rgw-ino-s* 'dark, black'; cf. Gr. *εἶςβος* 'darkness', *εἰςβενρός* and *εἰςμενός* 'moody, dark', Arm. *erek* 'night', Goth. *riqis* 'darkness'.

Néστος is the name of rivers in Thrace (now called *Mesta*), in Dalmatia, and on the island of Paros. The name comes from IE **ned-to-s* and is related to the river names Gr. *Néδα*, *Nέδων* (Peloponnesus), *Nedao* (Pannonia), *Nette*, *Netze* (Germany), cf. Skt. *nādati* 'rings, rustles', *nada-h* 'lowing, bull, river', *nadi* f. 'river'.

**Οσκιος*, (*Σκίος*), *Οἶκος* = *Oescus*, *Uscus*, *Yscos*, **Ισικός*, now called *Iskär*, the largest tributary of the Danube in Bulgaria. The name comes from IE **ud(e)s-kyo-*, a derivative of **udes-* 'water', cf. OIr. *u(i)sce* 'water'.

Pan(n)ysis, *Pannisis*, *Panyus*, *Πάνυσος*, *Πανυσός*, now *Kamčija*, a river in east Bulgaria which flows into the Black Sea. Another coastal river was called *Panisos* and is located to the south of the ancient *Pannysis*. The name comes from IE **ponis(y)o-s* and is related to OPruss. *pannean* 'marsh', Goth. *fani* n. 'mud' etc.

Στρυμόν, *Strymo(n)*, now called Bulg. *Struma*, from IE **srum-ōn* is related to E. *stream*, see section 4.1.

Timachus, now called *Timok*, a tributary of the Danube on the border between Bulgaria and Yugoslavia. The upper course is called Serbian *Crna reka* 'black river', Bulg. *Čeren Timok*. Therefore the Thracian or Dacian name *Tim-achus* is compounded from PIE **tṛ̥h-* 'dark, black' and **akw-ā* 'water', cf. OBG *tīma* 'darkness', *tīmñū* 'dark' from **tṛ̥h-ino-s*, Mid. Ir. *teim*, *temen* 'dark, grey'.

Τόνκος, *Tonzus*, later *Τούντζα*, now called *Tundža* (the upper course *Tăza*), a tributary of the *Marica* (Hebros). The upper course is a quick mountain river which flows in a steep rocky bed. The name comes from IE *(s)*tundyo-* (-*yā*) and is related to Arm. *tendium* 'noise, movement, pounding', Alb. *shtynj* 'to pound' (**studnyō*), L. *tundo* 'to push, beat'.

Therefore the names of the 12 largest rivers in the eastern part of the Balkan Peninsula are also of IE origin.

¹⁰⁵ According to Krahe (1954: 54), from IE **al-mo-* or **al-mā*, cf. E. *Yealm* (< *Alma*), a river in England, *Alma*, a river in Italy (Etruria).

11.4.3.3. The West

Below are the names of the 12 largest rivers to the west of the rivers Axios and Margos (now called Vardar and Morava) Rivers.

Ἀξίος* (Ἀξιδός*), now called *Vardar*, in Macedonia. **Ἀξίος* was the name of a tributary of the Istros (Danube) in Scythia Minor (Dobrudja), while **Ἀξι-οὔπολις*, **Ἀξι-οὔπολις*, *Axi-upolis* was a town at the estuary of the river. For the etymology see section 4.1.

The *Bosna* is the second largest tributary of the Sava. The name was not recorded in antiquity. Old Croatian **Bosīna* comes from L.-Illyr. (?) **Bas(s)inā*,¹⁰⁶ cf. the name of the *Basant(e)* River, now called Serbocroat. *Bosut*, a left tributary of the Sava. The name *Basant(-e)* comes from IE **bhōgy-ont-* (or *-nt-*) 'flowing', cf. G. *Bach* 'brook' from IE **bhōgi-*, Olcel. *bekkr*, OE. *becc* 'stream' from IE **bhōgyo-*.¹⁰⁷ *Bosuta* is the name of a river in Bosna and two rivers in Serbia. Thus the contemporary name of the *Bosna* River comes from IE **bhōgi-na*.

Δράβος, *Δράδος*, *Dravus*, *Draus*, now called Serbocroat. *Drava*, a tributary of the Danube. The name comes from IE **drowo-s* 'river, stream', cf. Skt. *drāvati* 'runs, flows' and the river names Skt. *Dravanti*, Pol. *Drawa*, *Drwęca*, Gall. *Druentia*, OPruss. *Drawe*.

Δρίλιον, *-ωνος* (*Δρεϊλιον*), *Drinus*, now called Alb. *Drin*: through dissimilation *r—n—n* > *r—l—n* from *Drinus*.

Δρεϊνός, *Drinus*, *Дрѣна*, now called Serbocroat. *Drina*, a tributary of the Sava. *Dhrynos* is also the name of a tributary of the Vijos River in Albania. These names come from IE **drū-no-*, cf. Celt. *Druna*, Lith. *Druja*, river names, Skt. *drāvati* 'runs, flows'.

**Εἰλῶν*, now called *Crna*, a tributary of the Vardar. The name is Phrygian or Macedonian. On the basis of the contemporary name *Crna reka* 'black (river)' **Εἰλῶν* can be explained as coming from IE *(*e*)*regw-* 'dark, black'.

Κόλαπις, *Colapis* (also *Κόλοπι*, *Κόλοπος*, *Κόλοπα*), *Colapius*, now called *Kulpa*, Serbocroat. *Kupa*, a tributary of the Sava. The name comes from *(*s*)*kel-* or *(*s*)*kul-* 'limpid' and **āp(i)-* 'water, river', cf. Alb. *ujë të kulluar* 'limpid water', Illyr. (or Greek) *Κέλι-νδρος*, now called Alb. *Lumi bardh* 'white river' from **kel-* 'limpid' and **udn-* 'water'. The change *el* > *ol* is known from Latin.

Μάργος (also *Βιόργος* with B-after the name of the tributary *Βιόργος*), *Margus*, *Margis*, now called Serb. *Morava*, Bulg. *Morāva*, a tributary of the Danube in eastern Yugoslavia. The name is (Daco)-Mysian. It is related to the river names Pol. *Mroga* (IE *or*, *ar* > Pol. *ro*), Celt. *Morga*, Fr. *Morge*, G. *Murg*. These names mean 'border river' and are related to L. *margō*, *-inis* 'boundary, limit', OIr. *mruig* (**mrogi-*) 'border district', Goth. *marka* f. 'border', G. *Mark*.¹⁰⁸ Its tributary, the *Βιόργος* (with *-γγ-* after the name of its tributary **Αγγρος*), may be considered to be the Celtic name of the same river, cf. OIr. *bruig* (**mrogi-*) 'border district', Cymr., Cornish Bret. *bro* 'district', Gall. *brogae* 'ager'. The Celts appeared very early in the territory between the Sava and the Morava Rivers, cf. Garašanin 1958: 121.

Νάρον, *-ωνος* (*-ονος*), *Naro*, *-onis*, *Nar*, *Narenum*, now called Ital. *Narenta*, Croatian *Neretva*, a river in Dalmatia, cf. the river names OPruss. *Narus*, Lith. *Nař-upe*, *Neris*, *Nerys*, *Nereta*, Russ. *Neretva*, Lith. *neriù*, *nėrti* 'to sink, to flee', Russ. *nora* (IE **norā*) 'cave, hole, ditch'.

Οἰνέως, now called Serbocroat. *Una*, a right tributary of the Sava. The name goes back to **unā* in which *ū* may be a reflection of *o* or of *u*-diphthong. The form is recorded

¹⁰⁶ From Illyr. **Bazina*, cf. L. *-isso* from Gr. *-ιζω*.

¹⁰⁷ Cf. also the German river name *Pegnitz* and the Italian name *Baganza*, which both come from an older **Bagantia*.

¹⁰⁸ Otherwise W. P. Schmid (1968: 251): Av. *maryā* 'meadow', Olcel. *merki* 'marshy meadow'.

only once in antiquity (Ptol.) and was moulded by folk etymology after Greek river names localities, and persons: *Οἰνεύς*, *Οἰνοῦς*, *Οἶνη*, *Οἶνῳ*. Since Gr. *oi* (and *v*) was pronounced *ū* in Ptolemaeus' time, the name is related to the Balto-Slavic river names *Una*, *Une*, *Unia*, *Unijej*, *Unya*, *Unawa*, *Uniawa*, Lith. *Aun-upis* from IE **ow-*; cf. Avest. *unā* f. 'hole, fissure (in the earth)'.

Urpanus, *Urbanus* (with the town of *Urbate*), now called Serbocroat. *Vrbas*, a river in Bosna. The name comes from IE **wṛbhāno-* (respectively **wṛbhā-tyo-*), a derivative of **wṛbhā*, cf. Lith *virb̃as*, ОЗІ *vr̃ba* 'willow', the Bulgarian river names *Vārbica*, *Vār-biška reka*, *Vārbiški izvor*.

Σαῶς, *Σάωος*, *Savus*, *Saus*, now called *Sava*, a tributary of the Danube, cf. the Gallic river names *Sava*, *Savara*, Gr. *σει* 'it rains' from PIE **seū-*.

Therefore the names of the 12 largest rivers in the western part of the Balkan Peninsula are also of IE origin.

*

All the river names which have been examined here can be convincingly interpreted as being IE.

The names of the largest river on the Balkan Peninsula, *Ἰστρος* (Thrac. from IE **isaro-s* 'strong, quick, turbulent') or *Δαυούιος*, *Δαυούβιος* (Celt., resp. Daco-Mys. (or Iran.) from IE **dānu-* 'river'), are also of IE origin.

There are no hydronyms (and in general no place names) on the Balkan Peninsula which are of Caucasian or Hispano-Iberian origin. The comparison, which is so often cited, of Iberian *Ἰβηρ* = Thrac. *Ἐβρος* is only a case of homophony. Another example of this sort is *Ἰγίη*, a lake in Aetolia, *Ὀῦρία* (*ou* = *u*), a marsh in Aetolia,¹⁰⁹ and *Ἐφύρα*, a frequent place name (Epirus, Perrhaibia, Thessaly, Aeolis, Sicyonia, and Argolis) which is compared with Basque *ur* 'water'. The Greek names are related to Old Norse *ur* 'rain', OPruss. *wurs* 'marsh' (**ūras*), iurim acc. sing., OLet. *jūri-*, Lett. *jūres*, *jārios* f. pl. 'sea', Lith. *jaurūs* 'marshy', *jāuras* 'marshy place'.¹¹⁰ These names come from IE **awer-* with vowel gradation **wer-*, **wēr-*, **ur-*. It is incorrect to speak of a substratum here, for there are correspondences in Baltic, Scandinavian, Indic, and Tocharian. Furthermore, *Ἐφύρα* 'at (on) the water (marsh)' is obviously an IE (Pelasgian or Greek) compound, which presupposes the word **ūrā* 'marsh'. It is highly improbable that a word such as 'water', which belongs to the basic word stock of every language, is a borrowing. But if we are going to speak of a borrowing in this case, it would be more acceptable to consider the Basque *ur* 'water' as a borrowing since Basque has borrowed many words from IE languages (pre-Celtic IE, Celtic, Latin, and Romance). In my opinion this is a case of homophony which is quite probable since Basque *ur* consists only of two phonemes.

A third example of this kind of comparison is the connection the Pan-Mediterraneanists make between *Καύκων*, a small river in Achaea, *Καυκάσιον* (v. l. *Θαυμάσιον*) *ῥος* in Arcadia, *Καῦκασα*, a harbor in Chios, *Καῦκασος*, a place on the island of Chios, and the Caucasian mountain *Καῦκασος*. This comparison is completely erroneous. As Kretschmer pointed out, *Καῦκασος*, *Καῦκασις* is a Hellenization of Proto-Indic (or Scyth.) *Croucasīs* 'nive can-

¹⁰⁹ Probably the same place as the lake.

¹¹⁰ On the basis of the name of the town of *Ἐφύρα* in Thessaly, which later was called *Κραννών* 'place where there is a spring', one may conclude, that the ancient name *Ἐφύρα* meant 'at (on) the water (marsh)'.

didus' (Pliny) from **krew-* (cf. Gr. *κρός* n. 'frost, ice') and Skt. *kāsāte* 'shines'.¹¹¹ *Καύκων*, *Καύκασα*, etc., are of Greek origin: *Καύκων* is = **καυκ-ών* 'place where the *καῦκον* plant grows', cf. the place names *Μαγαθών* from *μάγαθος* 'adull', *Κρομμυ-ών* from *κρόμμυον* 'onion', etc.; *Καύκασα* comes from **καυκ-ἄεσσα* 'rich with the plant *καῦκον*', cf. the place name *Ποιέσσα* from Dor. *ποιᾶ*, Att. *πόα* 'grass'. The name of the *καῦκον* 'δυῖνον' plant is of Greek origin: it is derived from **kəw-ko-* and is related to *καίω* 'to burn' from **kəw-yō-*, cf. *δαῦκον*, *δαῦκος*, from *δαίω* 'to burn'.¹¹²

It is well known that the names of the large rivers are very stable: they usually outlive ethnical changes. For this reason river names are of special importance for understanding ethnogenesis.

Almost all the river names which were examined have been recorded since antiquity and have been preserved over a period of 2000 to 3000 years, despite the fact that great ethnical changes on the Balkan Peninsula have taken place in the meantime. Therefore these names have come down to us from very ancient times.

The following conclusions can be deduced from all these facts: the Balkan Peninsula has, since most ancient times, been inhabited by IE tribes.

11.5. Conclusion

Undoubtedly, there are some rather hypothetical arguments in this book, however in discussing problems such as these, hypotheses are, on the whole, inevitable. The problem is which of them — the older or the new — should be considered to be the most probable, in the present state of linguistic science.

In the past many scholars have tried to establish that the original home of the Indo-Europeans was in southeastern Europe. The most eminent among them was Schrader (1907: 514, 806), who in many publications defined the IE primitive home as "the territories to the north and west of the Black Sea, including a more or less large part of the Danube plain."¹¹³ The investigations by E. Meyer (1948), Paret (1948), A. Scherer (1950; 1956: 3), Childe (1950: 146-147), Filip (1952: 52-53), McEvedy (1967: 20-21), Renfrew (1969), G. I. Georgiev (1971), etc., are based on similar principles. Meyer maintains the thesis — which is correct — that the cultures of "ribbon" ceramics, of "Schnurkeramik" and of the "Northern Neolithic group" were developed by Indo-Europeans, and that the formation of the Indo-European groups should be sought for during the Palaeolithic Period. Paret adheres to similar views. According to him, the original home of the Indo-Europeans was spread throughout a vast territory in northern Europe which included the southern part of the present territory of the USSR and extended to northern Iran. According to Scherer, this primitive home was in the "central and southern part of

¹¹¹ Cf. Pokorny 1951-69: 622: Scyth. **krohu-kasi-* 'ice-brilliant'; Thumb and Haudschild 1958: 57-58.

¹¹² *Δαῦκος*, *δαῦκον* is the name of various plants (*Athamanta cretensis*, *Peucedanum cervaria*, *Daucus carota*) which have a distinctly strong aroma and a bitter, rather hot taste.

¹¹³ Schrader and Nehring 1917-29, s. v. *Urheimat*.

Russia"; and according to Childe and Filip it was in southeastern Europe and Asia.

Some time ago I demonstrated (1941: 154-155; 1955: 319-20) that the primitive home of the Indo-European tribes included central and southeastern Europe as well as the north coast of the Black Sea, and that this vast territory became populated gradually through migrations from the south to the north.

On the basis of my investigations the archaeologist Tret'jakov (1953: 445), who took archaeological as well as ethnological data into consideration, concluded that the original home of the Indo-Europeans must be sought for in "the Danube-Balkan" region. He pointed out that the tribes who developed the agrarian and cattle-breeding culture of the 4th and the 3rd millennia B.C. in the Danube region were of Indo-European origin.

The English linguist Burrow (1955: 11-12) adheres to a similar view. In his opinion, during the 3rd millennium the Indo-European tribes had already spread themselves over a vast territory between the Rhine River and southwestern Russia, extending up to the Volga River. At that time the Indo-Europeans were neighbors to the northeast with the Finno-Ugrians. Burrow classifies the IE languages into several basic groups: a central group to which the so-called *satem* languages belonged and four peripheral groups: Western (Italic, Celtic, and Germanic), Greek, East European (Tocharian), and Hittite-Luwian.

In 1955 Merlingen (1955b: 92) tried to prove that the original home of the Indo-Europeans was approximately in the present territory of Rumania, Bulgaria, and Macedonia. The same year the American archaeologist Hencken (1955) published an article on the same subject. He correctly concluded that the original home of the Indo-Europeans must be sought for in southeastern Europe, but, as he did not know about the latest results of the investigations on the ancient languages of the Balkan Peninsula, he did not include this territory in the original home.

Gornung's article (1956) especially stresses the fact that the views on the late origin of the IE language community are untenable. He thinks that the date "should be moved... towards the early Neolithic or even to the transition from the Mesolithic to the early Neolithic." According to him, the following regions were included in the territory of the IE language community towards the end of the 4th and the beginning of the 3rd millennium B.C.: (a) a great part of the Balkan Peninsula; (b) the basin of the middle course of the Danube, Drava, Sava, and Tisza Rivers and the entire territory east of the Tisza River up to the Carpathians and the Tatra Mountains to the north; (c) the territory of the early Tripol'e culture (Tripol'e A).

According to McEvedy (1967: 20-21), central and southeastern Europe (excluding the Aegean region) were inhabited by IE tribes during the 5th millennium B. C.

Renfrew (1969) and G. I. Georgiev (1971) believe that the Neolithic "archaeological cultures" on the Balkan Peninsula were developed by the same tribes and peoples as those who had lived in this territory towards the end of the Bronze and during the Iron Age.

There are certain differences in the theories described above but they are not essential. The basis of all of them is the common acceptance of the idea that the original home of the Indo-Europeans was a more or less vast

territory which included the middle and eastern parts of the Danube basin and some marginal regions (for instance, the northern coast of the Black Sea). The Indo-European tribes slowly but gradually moved from this region into other territories in the course of many thousands of years.

On the basis of archaeological data, the archaeologist Brjusov (1952: 254) came to the conclusion that the ethnic groups which are historically attested were already formed around the 3rd millennium B.C. in the European territory of the USSR; these groups were: the Finnish languages to the north (the cultures of the Ural and Kama, and of the Volga and Oka); Slavic along the Dnieper and Vistula Rivers and further west (the Belo-Russian and the South Baltic cultures), Thracian (i. e., Dacian) to the southwest (the Tripol'e culture); and Scythian in the region of the black-soil steppe east of the Dnieper (the "steppe", catacomb, Poltavkina, and north Caucasian cultures). The linguistic data support most of these conclusions.

The history of the Slavic and Romance languages shows that a development period of 15 to 20 centuries was necessary in order to arrive at the existing differences between languages which are as closely related as the Slavic or the Romance languages are today. During the first half and the middle of the 2nd millennium B. C. Hittite, Greek, and Proto-Indic were entirely differentiated: they were far more different from each other than the Slavic or Romance languages are today. Taking into consideration the fact that in the primitive communal society every change took place at a very slow pace, one can draw the conclusion that the differentiation of the IE languages or language groups (Indo-Iranian, Hittite, Greek, etc.), i. e., the disintegration of common IE, started much earlier than the end of the Neolithic Period.

In my opinion, IE tribes inhabited central and southeast Europe from the Rhine River and the Alps to the Don River during the early Neolithic Period. The northern boundary was the North Sea, the Baltic Sea, and Western Dvina River. To the south this region included the Balkan Peninsula and western Asia Minor.

The following data are available on the geographical distribution of the specific IE language groups in this territory.

(1) The most ancient historical and archaeological data on the position of each language group.

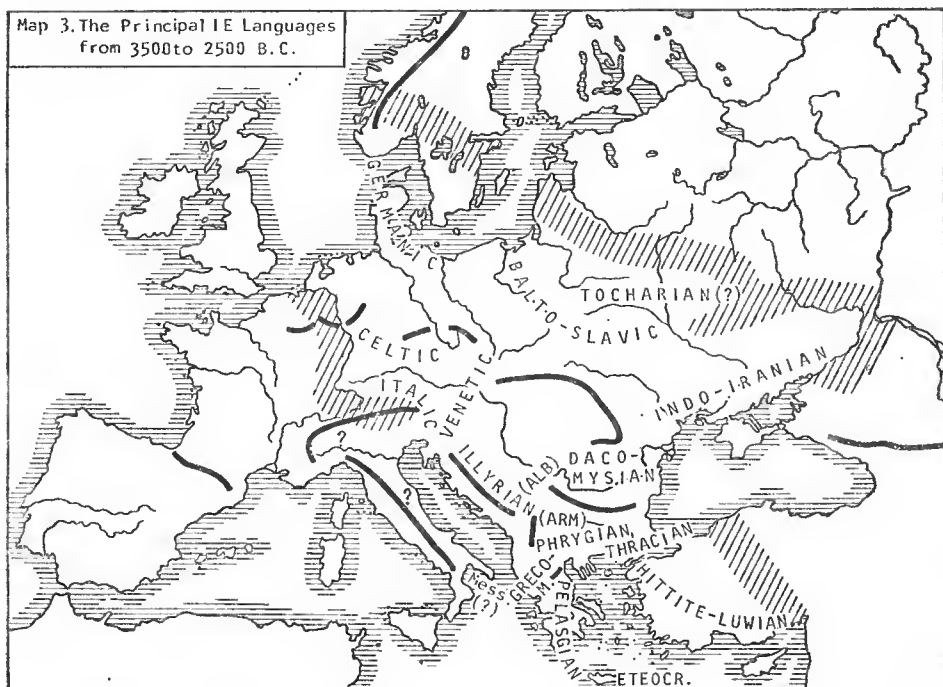
(2) Morphological, word-formative, phonological, and lexical elements in common.

(3) The toponymic data and more specifically the hydronymic data.

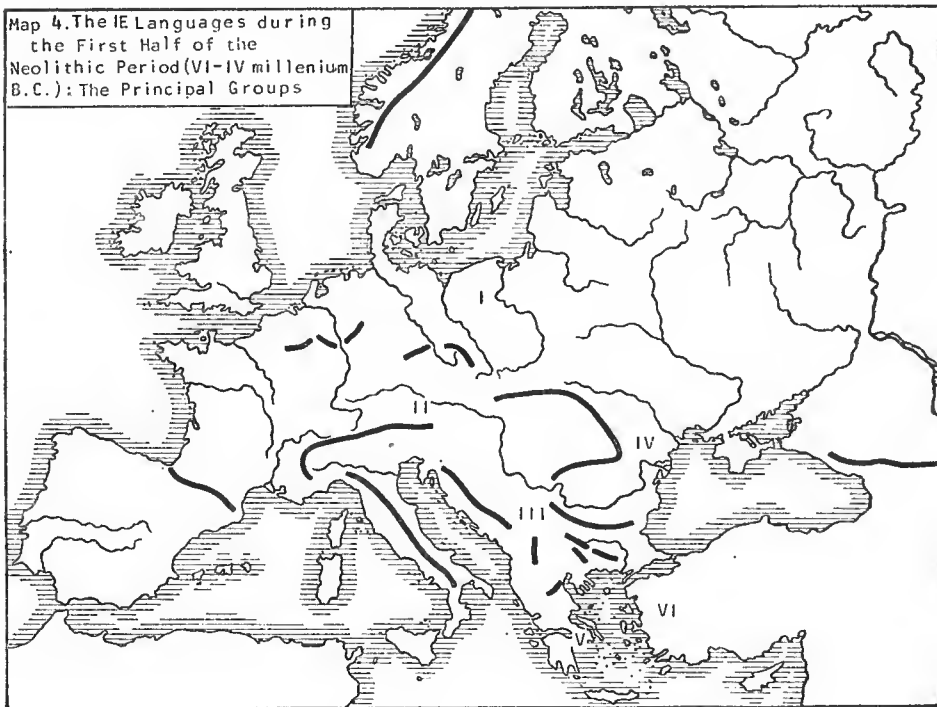
On the basis of these data it can be assumed with great probability that from 3500 to 2500 B. C. the IE languages were distributed in this territory more or less as they are shown in Map 3.¹¹⁴

¹¹⁴ Archaeologists have not established a definite chronology for the Mesolithic and the Neolithic Periods. Thus according to the information given in *Vsemirnaja istoria* (World History), vol. I (Moscow 1955), p. 89 (and 236-237), the Mesolithic and Neolithic Periods were tentatively defined by archaeologists as being between the 13th and the 4th millennium B. C., and the Neolithic Period during the 3rd millennium. According to the majority of German archaeologists (cf. *Grosser historischer Weltatlas*, vol. I (1954), p. 2-3), the Mesolithic Period lasted from 10,000 to 3500 B. C., while the late Neolithic Period lasted from 2500 to 2000 B. C. At the present time (at least as far as southeast Europe is concerned) the following data are considered to be acceptable: Mesolithic: 15th-13th to 7th millennium B. C., Neolithic: 7th-6th to 4th millennium B. C., Chalcolithic (Aeneolithic) Period and the Bronze Age: 4th-3rd to 2nd millennium B. C.

Map 3. The Principal IE Languages
from 3500 to 2500 B.C.



Map 4. The IE Languages during
the First Half of the
Neolithic Period (VI-IV millenium
B.C.): The Principal Groups



Consequently, the oldest cultures of this period, such as the cultures of Ertebölle, "ribbon ceramics", Bükk, Körös, Starčevo, pre-Sesklo, Sesklo, Karanovo I, Boian, pre-Cucuteni, the 'red ochre' mound-tombs, the Mid-Dnieper culture, etc.,¹¹⁵ were produced by peoples who spoke IE languages which were already well differentiated and which, not differing essentially, nevertheless had their own characteristic features.

During the first half of the Neolithic Period (7th-4th millenium B. C.) six principal IE language groups could already be distinguished (see Map 4)

I. The Northern IE Group or Germanic-Balto-Slavic-Tocharian

Germanic has elements in common with Balto-Slavic, Tocharian, Venetic, Italic, and Celtic. Balto-Slavic has elements in common with Germanic, Tocharian, Venetic, Albanian, and Indo-Iranian. The most important features in common are, however, those which connect Germanic and Balto-Slavic. The most typical isomorph of this group is the case ending with the consonant *-m*. Furthermore, there are many other similarities in these language groups in morphology, word-formation, and vocabulary.¹¹⁶ The archaeologists Tretjakov (1953) and Brjusov (1958) define the tribes who produced the "culture of the battle ax" and "corded ware" as having a Germanic-Balto-Slavic language which had not yet become differentiated.

While Balto-Slavic and Germanic have a number of features in common in their morphology, word formation, and vocabulary, the elements in common between Slavic and Indo-Iranian are fewer. We find similarities in the treatment of the velars and labiovelars which, however, can be considered to be isophonemes in related IE dialects. On the whole, ordinary phonematic phenomena which are often met within different languages cannot be taken as a reliable proof for a relationship between languages within a language family since they can occur in different languages which are not genetically connected to each other at all. One of the most ordinary phonematic changes is the palatalisation and assibilation of the velars and the delabialization of the labiovelars, of cf. L. *k^w* > Fr. *k*, L. *k* > Fr. *s*, such as in Slavic.¹¹⁷

Of course, the fact that Slavic has elements in common with Indo-Iranian cannot be denied. But the phenomena in common between Balto-Slavic and Germanic are superior in number and significance to the data which attests the relationship between Slavic and Iranian. The erroneous theory, which was prevalent for a long time, of the division of the IE languages into two groups *centum* and *satəm* was an obstacle in establishing the relationships among the language groups in the IE language family.¹¹⁸ However Germanic has also some features in common with Celtic, Venetic, and Italic.

It is probable that during the last stage of the development of common IE, when only Hittite-Luwian had become separated, the ancestors of the

¹¹⁵ See *Grosser historischer Weltatlas*, vol. I (1954), p. 2; McEvedy 1968: 20-21.

¹¹⁶ See section 8.1 and 9.1.

¹¹⁷ See section 2.2.

¹¹⁸ See section 2.6.

other languages still formed a uniform group of closely related dialects which were spoken in a limited territory, and the ancestors of the later groups — Germanic-Balto-Slavic and Indo-Iranian — occupied the northeastern part of the IE territory. Later the Germanic-Balto-Slavs became separated as they gradually moved northward.¹¹⁹

The following assumptions can be made about the relationships Tocharian has with the other languages in the IE family: (1) the two Tocharian languages had preserved a certain number of archaic elements and consequently had separated from the other IE languages at an early period; (2) the Tocharian languages had no special relationship either with Indo-Iranian or with the Western IE group: the preservation of the common IE verbal ending *r* cannot be considered to be an argument in favor of a close relationship;¹²⁰ (3) Tocharian had elements in common with Germanic-Balto-Slavic, as was seen in sections 9.5-8.

Thus it can be assumed that the ancestors of the Tocharians lived close to the Germanic-Balto-Slavic group. This conclusion is based on certain morphological, phonological, and lexical elements in common, as well as on the correspondences of the Tocharian word *läks-* 'fish', Russ. *losos'*, Lith. *lāsis*, and G. *Lachs* 'salmon'. This correspondence is of special importance because salmon lives only in those rivers which flow into northern seas (and not into the Black Sea or the Mediterranean Sea). Thus the ancestors of the Tocharians must have inhabited a region where salmon could be found. Migrating to the east, at a very early period, they preserved this word but its meaning changed.¹²¹ Gornung points out that this was not exactly the case: there is only one type of 'noble salmon' (*Salmo*), the *Salmo salar*, which has a limited distribution in central and eastern Europe. Related types of *salmo* are found in the rivers which flow in the basins of the Black Sea, the Caspian Sea, and the Aral Lake.¹²² This objection does not diminish the significance of the argument stated above because the basins of the Caspian Sea and the Aral Lake are not part of the territory which belonged to the IE original home, and because the southern Ukraine region was inhabited by Indo-Iranians.

There are several ancient Baltic borrowings in the Balto-Finnish languages, in Mordvinian and Cheremissan, but there is not a single ancient Slavic borrowing. Conversely, there are ancient Iranian (but no Indo-Iranian) borrowings in Slavic but these are lacking in the Baltic languages.¹²³ A Finno-Ugrian substratum can be discerned in Tocharian.¹²⁴ Furthermore one finds the word *läks-* 'fish' in Tocharian which indicates a northeastern European origin. One may conclude from these facts that the Balto-Slavs originally were separated from the Finno-Ugrians by the Tocharians. After the Tocharians migrated to the east, the Proto-Baltic tribes occupied their territory to the north of the Slavs and there they became differentiated as Baltic. Thereafter the Proto-Slavs moved to the southeast where they came into contact with the Iranians and in turn became differentiated as Slavs.

¹¹⁹ See section 8.2 and Map. 5.

¹²⁰ See section 9.1.

¹²¹ Cf. E. Meyer 1948.

¹²² Cf. Pisani 1956: 180.

¹²³ Cf. Kiparsky 1958.

¹²⁴ See section 9.8.

II. The Western Indo-European Group

Celtic (with Lepontic), Ligurian (the IE superstratum), Italic (Latino-Faliscan and Oscan-Umbrian), Venetic, Illyrian, Messapic (the Illyrian component?), and Sicilian (?) belong to this group.

Celtic, Italic (Latin), Venetic, and Messapic have a characteristic isomorph, namely the ending *-i* for the genitive sing. of *o*-stems: L. *-i*, Gall. *-i*, Ven. *-ii*, Mess. *-ihi*.¹²⁵

In ancient times the dialects of this group were spoken in approximately the territory of southern and central Germany, northern Switzerland, southwestern Czechoslovakia, Austria, western Yugoslavia (Slovenia) and perhaps also in northeastern Italy. Probably the "ribbon culture" of central Europe was developed by this group: it is dated from approximately the middle of the 4th millennium to the middle of the 3rd millennium B. C. The earliest date for the gradual infiltration in Italy cannot be established.

The theory of a close Italo-Celtic relationship has not been proved but nonetheless some typical features in common between Celtic and Italic show that the Proto-Celtic and Proto-Italic dialects were spoken in regions which neighbored closely on each other at some very ancient time.¹²⁶ Celtic had most probably already been differentiated during the 3rd millennium B. C. The 'mound tombs culture', which dates from the 2nd millennium B. C., in central Europe (southern Czechoslovakia, Austria, Bavaria, etc.) belonged to the Celts.

III. The Central Indo-European Group

Greek, Macedonian, Phrygian, and Armenian belong to this group. Macedonian shows a very close relationship with Greek: during the 3rd millennium B. C. these two languages were originally dialects of a common language. Greek is closely related to Phrygian and Armenian. Greek had no essential elements in common with the western group.¹²⁷ Phrygian probably had certain connections with Illyrian and also with Venetic and Italic, cf. Phryg. *αδ-δακετορ*, *αβ-βερε-τορ* = L. *ad-fici-tur*, *ad-fer-tur*.

Illyrian was probably an intermediate dialect between Venetic and Phrygian-Macedonian.

The Central group is related to the Eastern group.

IV. The Eastern Indo-European Group

Albanian, its ancestor Daco-Mysian, and Indo-Iranian belong to this group. The Boian and Gumelnița cultures were developed by the Daco-Mysians.

Albanian, the descendant of Daco-Mysian, is related to Indo-Iranian, Balto-Slavic (and Germanic), Armenian, and Greek.¹²⁸

¹²⁵ See Sommer 1924: 189-192 and sections 10.1-2.

¹²⁶ See section 10.1.

¹²⁷ Cf. Palmer 1954: 15, 23, 31.

¹²⁸ Cf. Pisani 1959b: 107, 134.

Indo-Iranian is related primarily to Daco-Mysian and also to Balto-Slavic and Greek; it had no specific features in common with the languages from the Western group, or with Tocharian, or with Hittite-Luwian. The ancient hydronymy of the northern coast of the Black Sea, that is from the Prut to the Don (and the Volga) Rivers, is of Indo-Iranian origin. The primitive home of the Indo-Iranians neighbored on the ancient fatherland of the Finno-Ugrians.

The closeness between Greek and Phrygian, as well as between Greek and Armenian on the one hand, and Greek and Indo-Iranian on the other, was established a long time ago.

Indo-Iranian was differentiated at some very ancient time, as is obvious from the lack in the Indo-Iranian languages of the agricultural terms which are typical of the IE languages in Europe. The culture of the red ochre tombs, probably also the Poltavkina culture, and later perhaps even the North Caucasian culture were developed by Indo-Iranians. Abaev (1965) demonstrated in detail that the north Iranian tribes were the autochthonous inhabitants of south eastern Europe and that the European territory of the southern part of the USSR was the ancient home of the Iranians.

As a whole, the dialect divisions of Indo-European go back to a period which dates back to long before the migration of the Indo-Iranians, which took place during the 4th and at the beginning of the 3rd millennium B. C.

Armenian and Phrygian may be considered to be intermediate dialects between Greek, Daco-Mysian, and Indo-Iranian on the one hand, and Greek and Thracian on the other.

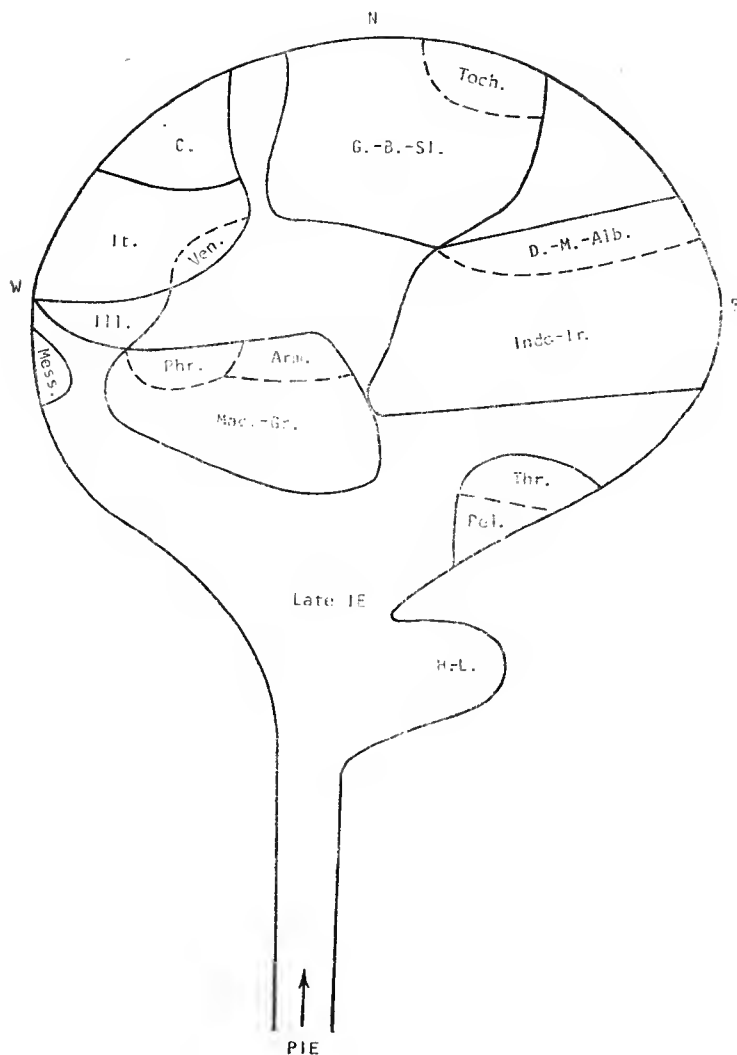
V. The Southern (Aegean) Indo-European Group

Thracian and Pelasgian belong to this group.

Thracian and Pelasgian are most probably two dialects of a single Thraco-Pelasgian language. Thraco-Pelasgian was an intermediate group between the central, eastern, and the Hittite-Luwian groups. The toponymic data show that the speakers in this language group had inhabited the southern and eastern part of the Balkan Peninsula since ancient times: the Pelasgians probably developed the pre-Sesklo (and Sesklo), Larissa I and Servia cultures, while the Thracians developed the Karanovo I-III (6th-4th millennium B. C.) culture.

VI. The Hittite-Luwian Group (or Southeastern Indo-European, Anatolian Group)

This group consisted of the following languages: Palaic, Hittite, Luwian with Hieroglyphic Luwian, Eteocretan (-Termilian), as well as their descendants Lydian, Etruscan, Elymian, Lycian(-Termilian), and Carian. The consonant shift, the shift of *o* into *a*, the (partial) preservation of the laryngeals, and a number of morphological peculiarities are typical of this group. According to Mellaart, two different cultures with a "fundamental difference of population... between west Anatolian-Aegean group and eastern cultures"



Map 5

existed in western and eastern Asia Minor, and a homogeneous culture existed in western Asia Minor (including Cilicia) until 2100 B. C.¹²⁹ The Hittite-Luwians inhabited western Asia Minor at least as far back as the beginning of the early Neolithic Period.

*

On the basis of their relationships within the IE family the IE languages may be classified into the following groups or branches (see Maps 4 and 5):

¹²⁹ Cf. Mellaart 1958: 13-16.

I. The Northern Indo-European Group

1. Germanic
2. Balto-Slavic
3. Tocharian

II. The Western Indo-European Group

1. Celtic (including Lepontic)
2. Ligurian (the IE superstratum)
3. Italic: (a) Latin; Faliscan, (b) Oscan-Umbrian
4. Venetic
5. Illyrian
6. Messapic
7. Sicilian (?)

III. The Central Indo-European Group

1. Greek, Macedonian
2. Phrygian
3. Armenian

IV. The Eastern Indo-European Group

1. Daco-Mysian, Albanian
2. Indo-Iranian

V. The Southern (Aegean) Indo-European Group

1. Thracian
2. Pelasgian

VI. The Hittite-Luwian or Southeast Indo-European (Anatolian) Group

1. Palaic
2. Hittite, Etruscan (with Raetic), Elymian; Lydian
3. Luwian and Hieroglyphic Luwian, Eteocretan = Termilian, Lycian (= Termilian); Carian

*

During the 3rd millennium B. C. the IE language groups which were spread throughout a vast territory had already become differentiated and specified.

Before the second quarter of this century Sanskrit and Greek, the only well known IE languages dating from the first half of the first millennium B. C., and partially Latin, which is recorded during the last centuries of the

same millennium, were the basis for the reconstruction of common IE. The other IE languages were taken into consideration only to a certain degree since their written documents came from much later times (Celtic, Germanic, Balto-Slavic) or were very scanty (Avestan, Old Persian). The comparative-historical grammar of the IE languages (as represented by Brugmann and Meillet, for instance), including the suppositions about the proto-history of the IE tribes and their languages, was based primarily on data from Sanskrit, Greek, and to a certain extent Latin. Reconstructed IE consequently reflected the knowledge and preferences of the Neogrammarian period.

Since the second quarter of this century, however, linguists have on the one hand become acquainted with new IE languages which were unknown until then—an entire group from the 2nd millennium B. C. (Hittite-Luwian), Mycenaean Greek, and partially Proto-Indic, as well as a later group (the two Tocharian languages). On the other hand, linguistic research during the last decades has essentially enriched our knowledge of various IE languages which were not well known (Leponitic, Venetic, Messapic, Etruscan, Thracian, Daco-Mysian, Phrygian, Pelasgian, Lycian, Lydian, etc.). Altogether this has considerably increased the data for the reconstruction of common IE and its history and as a result it has been possible to see the fundamental problems of Indo-European linguistics in a new light.

Bibliography

- Abaev, V. I.
 1949 *Osetinskij jazyk i fol'klor* [The Ossetian Language and Folklore] (Moscow, Leningrad).
 1954 Review of D. Dečev, *Xarakteristika na trakijskija ezik* [Characteristics of Thracian], *Vestnik drevnej istorii* 2, 86-90.
 1956 "O jazykovom substrate" [On the Linguistic Substratum], in *Institut jazykoznanija, Dokladi i soobščeniya*, vol. 9, 57-69.
 1958 *Istoriko-etimologičeskij slovar' ossetinskogo jazyka* [Historico-Etymological Dictionary of Ossetian], vol. 1 (Moscow).
 1965 *Skifo-evropejskie izoglosi* [Scythian-European Isoglosses] (Moscow).
 Abaev, V. I., B. V. Gornung, M. M. Guchman, P. S. Kuznecov
 1956 *Voprosy metodiki sravnitel'no-istoričeskogo izučeniya indoevropejskix jazykov* [Questions on the Methods of the Comparative-Historical Study of the Indo-European Languages] (Moscow).
 Adrados, F. R.
 1952 "La dialectologia griega como fuente para el estudio de las migraciones indoeuropeas en Grecia", *Emérita*, 20, 536-541 (Madrid).
 1956 "Achäisch, Jonisch und Mykenisch", *Indogermanische Forschungen* 62, 243-253.
 1961 *Estudios sobre las laringales indoeuropeas* (Madrid).
 Alessio, G.
 1946-47 "Un' oasi linguistica preindoeuropea nella regione baltica?", *Studi Etruschi* 19, 141-176.
 1951 "The Problem of balenare", *Word* 7, 21-42.
 1956 "Sostrato", *Archivio Alto Adige* 51, 55-68.
 Alfoeldi, A.
 1957 *Die trojanische Urahen der Römer* (Basel).
 Alsena, J.
 1959 "Pequeña introducción a Homero", *Estudios Clásicos* 5, 61-71.
 Ambrosini, R.
 1968 "Italica o anatolica la lingua dei graffiti di Segesta?", *Studi e saggi linguistici* 8, 160-172.
 1968-69 "Italica o anatolica la lingua dei graffiti di Segesta?", *Κώκαλος* 14-15, 168-180.
 1970a "A proposito di una recente pubblicazione sulla lingua dei graffiti di Segesta", *Studi e saggi linguistici* 10, 232-237.
 1970b "Problemi e ipotesi sulla lingua dei graffiti di Segesta", *Atti della Accademia nazionale dei Lincei, Rendiconti, Classe di scienze morali, storiche e filosofiche*, ser. 8, 25, 7-12, 461-474.
 André, J.
 1966 "Onomatopées et noms d'oiseaux en latin", *Bulletin de la Société de Linguistique* 61, 146-156.
 Andreev, N. D.
 1957 "Periodizacija istorii indoevropejskogo prajazyka" [A Periodization of PIE], *Voprosy jazykoznanija* 2, 3-18 (Moscow).
 Arcixovskij, A. V.
 1954 *Osnovy arxeologii* [Principles of Archaeology] (Moscow).
 Arntz, H.
 1933 *Sprachliche Beziehungen zwischen Arisch und Baltoslavisch* (Heidelberg).
 Arumaa, P.
 1956 "Die Verwandtschaftsverhältnisse zwischen Baltisch und Slavisch", *Zeitschrift für slavische Philologie* 24, 9-28.
 Ascoli, G. I.
 1870 *Corsi di glottologia, I: Fonologia comparata del sanscrito, del greco e del latino* (Turin, Florence).

- Bach, A.
1943 *Geschichte der deutschen Sprache*, 3rd ed. (Leipzig).
1953-54 *Deutsche Namenkunde* vol. 2, 1-2 (Heidelberg).
Balkan, K.
1954 *Kassitenstudien* (New Haven).
Bănăţeanu, M.
1943-44 *Revue des études indo-européennes* 3, 241-246 (Bucharest).
Barić, H.
1954 "Poreklo arbanasa u svetlu jezika" [The Origin of the Albanians in the Light of Language], *Lingvističke studije* 1, 7-48 (Sarajevo).
1957 "Albanisch, Romanisch und Rumänisch", *Godišnjak Naučnog društva NR Bosne i Hercegovine* 1, 1-16 (Sarajevo).
1959 *Istorija arbanaškog jezika* [The History of Albanian] (Sarajevo).
1961 "Albanische und albanisch-rumänische Wortstudien", *ib.*, 11, 121-45.
Baroja, J. C.
1951a "Le problème ibérique à la lumière des dernières recherches", *Jahrbuch für kleinasiatische Forschung* 1, 248-263.
1951b "Les couches de la toponymie basque et le problème de la parenté des langues", in *Troisième Congrès international de toponymie et d'anthroponymie*, Bruxelles, 15—19 August 1949, vol. 2 (Louvain), 173—182.
Bartholomae, C.
1895-1901 "Vorgeschichte der iranischen Sprachen. Awestasprache und Alpersisch", in *Grundriss der iranischen Philologie*, vol. 1 (Strassburg).
1904 *Altiranisches Wörterbuch* (Strassburg).
Bartoli, M.
1925 *Introduzione alla neolinguistica* (Ginevra).
1932 "Accordi antichi fra l'albanese e le lingue sorelle", *Studi Albanesi* 2, 1-73.
1940 "Una norma dell'albanese e del greco e la questione delle velari ario-europee", *Rivista d'Albania* 1, 234-260.
1942 "Ancora la norma dell'albanese e del greco e la questione delle velari ario-europee", *Rivista d'Albania* 3, 23-31.
1945 *Saggi di linguistica spaziale* (Turin).
Bartonek, A.
1959 Review of C. Ruijgh, *L'élément achéen dans la langue épique*, *Sbornik PFF (Praci Filozofičke fakulteti) Brnenské Univerzity* 8, 121—123 (Brno).
1961 "Zur Frage der Äolismen und Achäismen in der homerischen Sprache seit der Ventrischen Entzifferung der Linear-B-Schrift", in *Minoica und Homer* (Berlin) 1-9.
Bartonek, A., ed.
1966 *Studia Mycenaea. The Mycenaean Symposium*, Brno, 10-15 April, 1966 (Brno).
Battisti, C.
1935 "La posizione linguistica dell'etrusco", *Scientia* 57, 366-378.
Bechert, J.
1966 "Awarisch *hobol* und *halma*", *Münchener Studien zur Sprachwissenschaft* 19, 129-141 (München).
Bechtel, F.
1892 *Die Hauptprobleme der idg. Lautlehre seit Schleicher* (Göttingen).
1906 *Beiträge auf dem Gebiete der idg. Sprachen* 30, 271-279.
1921-24 *Die griechischen Dialekte*, vols. 1-3 (Berlin).
Beeler, M. S.
1949 *The Venetic Language* (California).
1956 "Venetic and Italic", in *Hommage à M. Niedermann* (Bruxelles) 48-57.
1966 "The Interrelationships within Italic", in *Ancient Indo-European Dialects*, ed. by H. Birnbaum and J. Puhvel (Berkeley and Los Angeles), 51—58.
Belardi, W.
1951 *Sui nomi ari* (Milan).
Beloch, J.
1926 *Griechische Geschichte*, vols. 1-2 (Leipzig).
Bennett, E. L.
1958a *The Mycenae Tablets*, vol. 2 (Philadelphia).
1958b *The Olive Oil Tablets of Pylos* (Salamanka).
Bennett, E. L., J. Chadwick, and M. Ventris
1959 *The Knossos Tablets. A Transliteration* (London) (4th edition by J. Chadwick, J. T. Killen, and J. P. Olivier, 1971).

- Bennett, E. L., and J.-P. Olivier
 1973 *The Pylos Tablets Transcribed, Part I: Texts and Notes* (Roma).
 Benveniste, E.
 1935 *Origines de la formation des noms en indo-européen* (Paris).
 1936 "Tokharien et Indo-Européen", in *Indogermanen und Germanen (Hirt-Festschrift)*, vol. 2 (Heidelberg), 227-240.
 1948 *Noms d'agent et noms d'action en indo-européen* (Paris).
 1962 "Les substantifs en -ant- du hittite", *Bulletin de la Société de Linguistique* 57, 44-51.
 1966 *Problèmes de linguistique générale* (Paris).
 Bérard, J.
 1949 "La question des origines étrusques", *Revue des études anciennes* 51, 201-245.
 1952 "Philistins et préhellènes", *Revue archéologique* 37, 129-142.
 Berneker, E.
 1908-13 *Slavisches etymologisches Wörterbuch* (Heidelberg).
 Bernštejn, S. B.
 1946 Očerki sravnitel'noj grammatiki slavjanskix jazykov (prospekt), *Kratkie soobščeniya Instituta slavjanovedenija* 18, 3-26.
 1958 "Balto-skavjanskaja jazykovaja soobščnost'" [Balto-Slavic Language Unity], *Slavjanskaja filologija* 1, 45-67.
 Bertoldi, V.
 1937 "Contatti e conflitti di lingua nell'antico Mediterraneo", *Zeitschrift für romanische Philologie* 57, 137-169.
 1939 "Prerogative culturali mediterranee nel lessico greco e latino", *Archivio glottologico italiano* 31, 35-101.
 Bertoni, G.
 1928 *Breviario di neolinguistica* (Modena).
 Bezzenberger, A.
 1890 "Die indogermanischen Gutturale", *Beiträge zur Kunde der indogermanischen Sprachen* 16, 234-260 (Göttingen).
 Bilabel, F.
 1927 *Geschichte Vorderasiens und Aegyptens vom 16. bis 11. Jahrhundert v. Chr.* (Heidelberg).
 Birnbaum, H.
 1971 "Noch einmal zur Problematik des Lautwandels idg. s > slav. x", *Skando-slavica* 17, 235-242.
 Birnbaum, H., and J. Puhvel, eds.
 1966 *Ancient Indo-European Dialects* (Berkeley, Los Angeles).
 Birwé, R.
 1956 *Griechisch-arische Sprachbeziehungen im Verbalsystem* (Walldorf, Hessen).
 Bittel, K.
 1950a *Grundzüge der Vor- und Frühgeschichte Kleinasiens*, 2nd ed. (Tübingen).
 1950b "Hethiter und Proto-Hattier", *Historia* 1, 266-286.
 Blegen, C. W.
 1959a "The Palace of Nestor and West Messenia", in *Summaries of Papers Read at the Third International Congress of Classical Studies*, London, 6-11, 9, 1959 (London).
 Blegen, C. W., and M. Lang,
 1958 "The Palace of Nestor Excavations of 1957, I", *American Journal of Archaeology* 62, 175-18
 1959 "The Palace of Nestor Excavations of 1958", *American Journal of Archaeology* 63, 121-137.
 Boisacq, E.
 1923 *Dictionnaire étymologique de la langue grecque* (Heidelberg, Paris).
 Bokarev, E. A.
 1954 "Zadači sravnitel'no-istoričeskogo izučeniya kavkazskix jazykov" [Problems in the Comparative Study of the Caucasian Languages], *Voprosy jazykoznanija* 3, 47-53.
 Bolelli, T.
 1940 "Unità italica ed italo-celtica", *Annali della Scuola superiore di Pisa*, ser. 2, 9, 97-134.
 Bolelli, T., and E. Campanile
 1961 "Stratificazione dell'onomastica celtica antica", in *Riassunti delle comunicazioni, VII Congresso internazionale di scienze onomastiche*, Florence, Pisa, 11-17 May 1961 (Florence), 22-23.

- Bonfante, G.
 1936 "Alcune innovazioni greco-celtiche", *Rivista indo-greco-italica* 19, 161-179.
 1941 "The Trojans", *Classical Philology* 36, 6-12.
 1946 "Who Were the Philistines?", *American Journal of Archaeology* 50: 251-262.
 1947 "The Neolinguistic Position", *Language* 23, 344-375.
 Bopp, F.
 1816 *Über das Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen, lateinischen, persischen und germanischen Sprache* (Frankfurt).
 Bosch-Gimpera, P.
 1924 "Basken", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 1 (Berlin), 15-19.
 1926 "Iberer", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 6 (Berlin), 17-26.
 1929 "Le relazioni mediterranee postmicenee ed il problema etrusco", *Studi Etruschi* 3, 9-40.
 1949 "La formazione dei popoli della Spagna", *La parola del passato* 11, 97-129.
 1951 "Autour des problèmes de toponymie celtique en Espagne", in *Troisième Congrès international de toponymie et d'anthroponymie*, Bruxelles, 15-19. 8, 1949, vol. 3 (Louvain), 497-507.
 1956-57 "Ibères, Basques, Celtes", *Orbis* 5, 329-338; 6, 126-134.
 Bossert, H.
 1944 *Ein hethitisches Königssiegel* (Berlin).
 1948 "Karatepe de buluman Fenike-Eti bilinguistleri", *Belleten* 12, 515-522.
 1950 "Schrift und Sprache der Sideten", *Belleten* 14, 1-14.
 Bouda, K.
 1948 "Baskisch und Kaukasisch", *Zeitschrift für Phonetik* 2, 182-202.
 1949 *Baskisch-kaukasische Etymologien* (Heidelberg).
 1950 "L'euscario-caucasique", *Homenaje don Julio de Urquijo* 3, 207-232 (San Sebastian).
 Brandenstein, W.
 1935 "Karische Sprache", in *Realencyclopädie der Altertumswissenschaft*, Suppl. 6, 140-145.
 1936a *Die erste "indogermanische" Wanderung* (Vienna).
 1936b "Thrake", in *Realencyclopädie der Altertumswissenschaft* (Stuttgart) s. v. 407-414.
 1937 "Etrüsklerin ve Tyrrhenlerin en eski tarihine ait dil tetkikleri", *Belleten* 1, 677-713.
 1938a Review of V. I. Georgiev, *Die Träger der kretisch-mykenischen Kultur, ihre Herkunft und ihre Sprache*, *Indogermanische Forschungen* 56, 292-295.
 1938b "Der indogermanische Anteil im Etruskischen", *Revue internationale des études indo-européennes* 1, 301-322.
 1954 *Griechische Sprachwissenschaft*, vol. 1 (Berlin).
 1956 Review of A. Nehring, *Die Problematik der Indogermanenfrage*, *Kratylos* 1, 81.
 1958 "Sprache und Schrift von Side in Pamphylien", *Minoica (Festschrift zum 80. Geburtstag von J. Sundwall)* (Berlin), 80-91.
 Bräuer, H.
 1961 *Slavische Sprachwissenschaft*, vol. 1 (Berlin).
 Brice, W. C.
 1961 *Inscriptions in the Minoan Linear Script of Class A* (Oxford).
 Brjusov, A.
 1952 *Očerki po istorii plemen Evropejskoj časti SSSR v neolitičeskiju epoxu* [Outlines of the History of the Tribes in the European Part of Russia in the Neolithic Period] (Moscow).
 1958 "K voprosu ob indoevropejskoj probleme" [On the Question of the IE Problem], *Sovetskaja arxeologija* 3, 18-26.
 Bröndal, V.
 1939 "Linguistique structurale", *Acta linguistica* 1, 2-10.
 Brückner, A.
 1917 *Slavisch-Litauisch* (Strassburg).
 Brugmann, K.
 1884 "Zur Frage nach den Verwandtschaftsverhältnissen der indogermanischen Sprachen", *Internationale Zeitschrift für allgemeine Sprachwissenschaft* 1, 226-256 (Leipzig).
 1897-1916 *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*, 2nd ed., vols. 1-3 (Strassburg).
 1922 *Kurze vergleichende Grammatik der idg. Sprachen* (Berlin, Leipzig).
 Buck, C. D.
 1904 *A Grammar of Oscan and Umbrian*, 2nd ed. (Boston).
 1933 *Comparative Grammar of Greek and Latin* (Chicago, Ill.).

- 1949 *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* (Chicago, Ill.).
- 1953 Review of F. R. Adrados, "La dialectologia griega como fuente para el estudio de las migraciones indoeuropeas en Grecia", *Language* 29, 188-189.
- 1955 *The Greek Dialects* (Chicago, Ill.).
- Budimir, M.
- 1937 Review of V. I. Georgiev, *Die Träger der kretisch-mykenischen Kultur*, *Revue internationale des études balkaniques* 3, 283-287.
- Bugge, S.
- 1897 *Lykische Studien*, vols. 1-2 (Oslo).
- Buonamici, G.
- 1939 *Fonti di storia etrusca* (Florence).
- Burrow, T.
- 1955 *The Sanskrit Language* (London; 2nd ed. 1965).
- Buysens, E.
- 1957-58 "Les mutations consonantiques vues par Kuryłowicz", *Lingua* 7, 421-427.
- Çabej, E.
- 1956 "Über einige mit z- anlautende Wörter des Albanischen", *Zeitschrift für Phonetik und allgemeine Sprachwissenschaft* 9, 209-229.
- 1958 "Problemi i autoktonisë së Shqiptarëve në dritën e emrave të vendeve", *Buletin i Universitetit shtetëror të Tiranës, ser. shk. shoq.* 12, 2, 54-66.
- 1959 "Unele probleme ale istoriei limbii albaneze" [Some Problems of the History of Albanian], *Studii și cercetări lingvistice* 10, 522-560.
- 1964 *Studime filologjike*, vol. 3 (Tirana).
- 1965 "Stand und Aufgaben der albanischen Wortforschung", *Studia Albanica* 1, 9-29.
- 1972 "Über einige Lautregeln des Albanischen", *Die Sprache* 18, 132-154.
- Camaj, M.
- 1966 *Albanische Wortbildung* (Wiesbaden).
- Campanile, E.
- 1968 *Studi sulla posizione del latino*, *Studi e saggi linguistici* 8, 16-84 (Pisa).
- Capidan, T.
- 1922 "Alb.-rumän. Beziehungen", *Dacoromania* 2, 444-554.
- Cardona, G. H., M. Hoenigswald and A. Senn. eds.
- 1970 *Indo-European and Indoeuropeans* (Philadelphia).
- Carnoy, A.
- 1955 *Dictionnaire étymologique du proto-indo-européen* (Louvain).
- 1957 *Dictionnaire étymologique de la mythologie gréco-romaine* (Louvain).
- Carruba, O.
- 1963 "Lydisch und Lyder", *Mitteilungen des Instituts für Orientforschung*, 8, 383-408.
- 1965 Review of G. Neumann, *Untersuchungen zum Weiterleben hettitischen und luwischen Sprachgutes in hellenistischer und römischer Zeit*, *Orientalistische Literaturzeitung* 60, 554-569.
- 1969 "Origini e preistoria degli Indoeuropei d'Anatolia", *Rivista di Filologia* 97, 11-26.
- 1970 *Das Palaische* (Wiesbaden).
- 1976 "La positione linguistica del venetico", *Athenaeum*, 110-121.
- Caskey, L.
- 1966 *Greece and the Aegean Islands in the Middle Bronze Age* (Cambridge).
- Čeboksarev, N. V., S. A. Tarakanov and L. N. Terent'ev
- 1955 *Tezisi dokladov na sessii Otdelenija istoričeskix nauk Moscow*, 11-16 May, 1955 (Moscow, Leningrad), 13-19.
- Černyx, P. J.
- 1957 "O nekotoryx staryx nazvanijax rek (Toponimičeskie zametki)" [On some Old River Names (Toponymic Notes)], *Movoznavstvo* 14, 91-102.
- Chadwick, J.
- 1954 "Mycenaean: A Newly Discovered Greek Dialect", *Transactions of the Philological Society*, 1-23 (London).
- 1956 "The Dialects and Greek pre-History", *Greece and Rome* 3, 38-43.
- 1958a *The Decipherment of Linear B* (Cambridge).
- 1958b "Mycenaean Elements in the Homeric Dialect".
- 1969 "Greek and Pre-Greek", *Transactions of the Philological Society*, 80-98 (London).
- Chadwick, J., and L. Baumbach
- 1963 "The Mycenaean Greek Vocabulary", *Glotta* 41, 157-271.

- Chadwick, J., J. T. Killen and J. P. Olivier
 1971 *The Knossos Tablets*, 4th ed. (Cambridge).
 Chantraine, P.
 1933 *La formation des noms en grec ancien* (Paris).
 1948-53 *Grammaire homérique*, vols. 1-2 (Paris).
 1956 "Sur les noms d'agent féminins en mycénien", *Etudes Mycéniennes, Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 3-7 April, 1956 (Paris), 99-104.
 1958a "Conséquence du déchiffrement du mycénien pour la philologie homérique", *Athenaeum. Atti del 2° Colloquio internazionale di studi minoico-micenei*, Pavia, 1—5 Sept. 1958 (Paris), 46, NS. 36, 314-327.
 1958b *Grammaire homérique*, 3rd ed., vol. 1 (Paris).
 1966 "La langue des Macédoniens et leur onomastique", *Bulletin de la Société de Linguistique* 61, 157—166.
 1968-80 *Dictionnaire étymologique de la langue grecque. Histoire des mots*, vols. 1-4 (Paris).
 Chapoutier, F.
 1932 *Mélanges Glotz*, vol. 1 (Paris), 183-196.
 Childe, V. G.
 1950 *Prehistoric Migrations in Europe* (Oslo).
 CIE = *Corpus inscriptionum Etruscarum*.
 Čiháň, V.
 1952 "Zu den neuen Forschungsergebnissen auf dem Gebiete der vorgriechischen Sprachgeschichte im östlichen Mittelmeer", *Archiv Orientální* 20, 584-597.
 Čikobava, A. S.
 1953 *Vvedenie v jazykoznanije* [Introduction to Linguistics], 2nd ed., vol. 1 (Moscow).
 1959 *Problema jazyka kak problema jazykoznanija* [The Problem of Language as a Problem in Linguistics] (Moscow).
 CIL = *Corpus inscriptionum Latinarum*.
 Cimochowski, W.
 1958 "Prejardhja e gjuhës shqipe", *Bulletin i Universitetit shtetëror të Tiranës, ser. shk. shoq.* 12, 2, 37-53.
 1960 "Des recherches sur la toponomastique de l'Albanie", *Lingua Posnaniensis* 8, 133—145.
 Cohen, M.
 1947 *Essai comparatif sur le vocabulaire et la phonétique du chamito-sémitique* (Paris).
 Couvreur, W.
 1944 "Tocharica", *Revue belge de philologie et d'histoire* 23, 232-236.
 1947 *Hoofdzaken van de tochaarse klank- en vormleer* (Löwen).
 1950 "B-tocharische Etymologien", *Archiv Orientální* 18, 1-2, 126-130.
 Cox, C. W. M., and A. Cameron
 1932 "A native Inscription from the Myso-Phrygian Borderland", *Klio* 25(N. F. 7), 34-49.
 Crossland, R. A.
 1951 "A Reconsideration of the Hittite Evidence for the Existence of 'Laryngeals' in Primitive Indo-European", *Transactions of the Philological Society*, 88—130 (Hartford).
 1967 *Immigrants from the North* (= *The Cambridge Ancient History* 1) (Cambridge), 27.
 Curtius, G.
 1858-62 *Grundzüge der griechischen Etymologie* (Leipzig) (5th ed., 1879).
 Czekanowski, J.
 1957 *Zur Anthropologie des Baltikums* (Wrocław).
 Daniel, J. F.
 1941 "Prolegomena to the Cypro-Minoan Script", *American Journal of Archaeology* 45, 249-282.
 Davis, S.
 1961 "The Affinities of the Language of Linear A — the Solution of a Problem", *Minutes of the London Mycenaean Seminar*, 18 Oct. 1961 (London), 243-250.
 Debrunner, A.
 1921 *Die Sprache der Hethiter* (Bern).
 1926 "Hethiter", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 4, 2 (Berlin), 525-536.
 Debrunner A., and J. Wackernagel
 1930 *Altindische Grammatik*, vol. 3 (Göttingen).

- Dečev, D.=Detschew
 1954 "Trakijski nazvanija na naši reki" [The Thracian Names of Our Rivers], *Izvestija na Instituta za balgarski ezik* 3, 267-283.
 1957 *Die thrakischen Sprachreste* (Vienna).
 1960 "Charakteristik der thrakischen Sprache", *Linguistique Balkanique* 2, 147-213 (1st ed., 1952).
- Deeters, G.
 1938 Review of A. Nehring, *Die Indogermanen und Germanenfrage*, *Indogermanische Forschungen* 56, 138-147.
 1940 Review of W. E. Collinson, *Indication*, *Indogermanische Forschungen* 57, 297-312.
 1952 "Sprache (Literatur), Kultur, Allgemeines", *Deutsche Literaturzeitung* 73, 206-211.
 1956 "Der Name der kaukasischen Iberer", in *Gedenkschrift P. Kretschmer*, vol. 1 (Wiesbaden, Wien), 85-88.
 1963 "Die kaukasischen Sprachen", in *Handbuch der Orientalistik*, vol. 1, 7 (Leiden, Köln).
- Deroy, L.
 1947-48 "Inscriptions minoennes: bibliographie critique", *Revue hittite et asianique* 8, 36-48.
 1955 "Les inscriptions cariennes de Carie", *Antiquité classique* 24, 305-316.
- de Saussure, F.
 1916 *Cours de linguistique générale* (Paris).
- de Simone, C.
 1962 "Die messapische Sprache", *Kratylos* 7, 113-126.
 1964 "Die messapischen Inschriften", in H. Krahe, *Die Sprache der Illyrier*, vol. 2 (Wiesbaden).
- Desnickaja, A. V.
 1952 "Voprosy izučenija drevnix jazykov Maloj Azii i sravnitel'naja grammatika indoevropejskix jazykov" [Questions on the Study of the Old Languages of Asia Minor and the Comparative Grammar of the IE Languages], *Voprosy jazykoznanija* 4, 39-58.
 1955 *Voprosy izučenija rodstva indoevropejskix jazykov* [Questions on the Study of the Relationship between the IE Languages] (Moscow, Leningrad).
 1968 "Rekonstrukcija elementov drevnealbanskogo jazyka i obščebalkanskije lingvističeskie problemy" [A Reconstruction of the Elements of Old Albanian and the Balkan Linguistic Relations], in *Actes du 1er Congrès international des études balkaniques*, Sofia, 26.8-1. 9, 1966, vol. 6 (Sofia), 185-201.
- Devoto, G.
 1929 "Rapporti onomastici etrusco-italici", *Studi Etruschi* 3, 259-282.
 1937 "Illiri, Tirreni, Piceni", *Studi Etruschi* 11, 263-269.
 1938 "I problemi dell'etimologia indeuropea", in *Scritti in onore di A. Trombetti* (Milan), 371-376.
 1943 "Pelago e peri-indoeuropeo", *Studi Etruschi* 17, 359-367.
 1944 "Etrusco e peri-indoeuropeo", *Studi Etruschi* 18, 187-197.
 1958 *Scritti minori* (Florence).
 1962 *Origine indeuropee* (Florence).
 1967 *Gli antichi Italici*, 3rd ed. (Florence).
 1969a "Il metodo comparativo classico e le correnti linguistiche attuali", in *Actes du X^e Congrès International des Linguistes*, Bucarest, 28.8-2.9, 1967, vol. 1 (Bucharest), 123-135.
 1969b *Storia della lingua di Roma* (Bologna) (1st ed., 1939).
- Dickenmann, E.
 1958 "O balto-slavjanskoj obščnosti" [On the Balto-Slavic Community], *Voprosy jazykoznanija* 1, 53-54.
- Dikaios, P.
 1953a "An Inscribed Tablet from Enkomi, Cyprus", *Antiquity* 27, 103-107.
 1953b "A Second Inscribed Clay Tablet from Enkomi", *Antiquity* 27, 233-237.
 1956 "A New Inscribed Clay Tablet from Enkomi", *Antiquity* 30, 40-41.
- D'jakonov, I. M.
 1954 "O jazykax drevnej Perednej Azii" [On the Languages of Ancient Near East], *Voprosy jazykoznanija* 5, 43-64.
 1957 "Xattskij jazyk" [The Hattic Language], *Vestnik drevnej istorii* 3, 88-99.
 1958 *Voprosy grammatiki i istorii vostočnix jazykov* [Questions on the Grammar and History of the Oriental Languages] (Moscow, Leningrad).
 1967 *Jazyki drevnej Perednej Azii* [The Languages of the Ancient Near East] (Moscow).

- 1976 "Mesto frigijskoga sredi indoevropskih jazykov", *Drevnij vostok* 2, 158-164.
Doria, M.
- 1961 "Aspetti della toponomastica micenea delle tavolette in lineare B di Pilo", in *Riassunti delle comunicazioni. VII Congresso internazionale di scienze onomastiche*, Florence, Pisa, 11—17.5, 1961 (Florence), 422-430.
- Ducati, P.
- 1938 *Le problème étrusque* (Paris).
- Dunaevskaja, I. M.
- 1954 "O xaraktere i svjazax jazykov drevnej Maloj Azii" [On the Character and the Relations of the Languages of Ancient Asia Minor], *Voprosy jazykoznanija* 6, 62-79.
- 1959 "Porjadok razmeščenija prefiksov xattskogo glagola" [The Grouping of the Prefixes in the Hattic Verb], *Vestnik drevnej istorii* 1, 20-34.
- 1960 *Issledovanija po istorii kul'tury narodov vostoka* [Research on the Cultural History of the Near East Peoples] (Moscow, Leningrad).
- 1961 "Principy struktury xattskogo glagola" [Principles of the Structure of Hattic Verb], *Peredneazijskij sbornik*, 57-159 (Moscow).
- Duridanov, I.
- 1959 "Za njakoj redki slovoobrazovatelni tipove v bälgarskata toponimija" [On Some Rare Inflectional Types in the Bulgarian Toponymy], *Slavističen sbornik* 1, 209-250.
- 1969 *Thrakisch-dakische Studien*. 1. *Die thrakisch- und dakisch-baltischen Sprachbeziehungen* (Sofia).
- Dussaud, R.
- 1953 *Préhydriens, Hittites et Achéens* (Paris).
- Džhaukjan, G. V.
- 1963 *Urartskij i indoevropskie jazyki* [Urartean and the IE Languages] (Erevan).
- Edel'man, D. I.
- 1965 *Dardskie jazyki* [The Dardian Languages] (Moscow).
- Eilers, W.
- 1954 "Der Name Demawend", *Archiv Orientalni* 22, 267-374.
- El'nickij, L. A.
- 1959 "Novije knigy po istorii kul'tury" [New Books on Cultural History], *Sovetskaja arxeologija*, 309-316.
- Ernout, A., and A. Meillet.
- 1951 *Dictionnaire étymologique de la langue latine. Histoire des mots*, 3rd ed. (Paris).
- Evangelisti, E.
- 1950 "I modi di articolazione indoeuropei nelle palatalizzazioni tocariche", *Ricerche linguistiche* 1, 132-144.
- Falkenhahn, V.
- 1956 "Entstehung, Entwicklung und Ende der urslavischen Sprachgemeinschaft in polnischen Veröffentlichungen von T. Lehr-Splawiński", *Zeitschrift für Slawistik* 1, 49-88.
- Falkner, M.
- 1948 "Zur Frühgeschichte des griechischen Alphabets", in *Frühgeschichte und Sprachwissenschaft* (Graz), 91-113.
- Faure, P.
- 1964 *Fonctions des cavernes crétoises* (Paris).
- Feist, S.
- 1913 *Kultur, Ausbreitung und Herkunft der Indogermanen* (Berlin).
- 1926 "Die Indogermanen", *Reallexicon der Vorgeschichte*, ed. by M. Ebert, vol. 4 (Berlin), 61-69.
- 1928 "Die Ausbreitung des idg. Sprachstammes über Nordeuropa in vorgeschichtlichen Zeit", *Wörter und Sachen* 11, 17-29.
- 1939 *Vergleichendes Wörterbuch der gotischen Sprache* (Leiden).
- Fiandra, E.
- 1968 "A che cosa servivano le cretule di Festo?", in *Atti del II Congresso di studi cretesi*, Rome, 1-5.9, 1967, vol. 1 (Rome), 383—389.
- Fick, A.
- 1868 *Vergleichendes Wörterbuch der indogermanischen Sprachen* (Göttingen) (4th ed., 1890-93).
- 1873 *Die ehemalige Spracheinheit der Indogermanen Europas* (Göttingen).
- 1896-97. "Altgriechische Ortsnamen, I—II", *Beiträge zur Kunde der indogermanischen Sprachen* 21, 237-286; 22, 1-76.

- 1900 "Altgriechische Ortsnamen", *Beiträge zur Kunde der indogermanischen Sprachen* 25, 224-238.
- 1905 *Vorgriechische Ortsnamen als Quelle für die Vorgeschichte Griechenlands* (Göttingen).
- Filip, J.
- 1952 *Ze Současné problematiky evropského pravěku: Indoevropská otázka a lid se šňůrovou keramikou* [On the Problems of the European pre-History: the Question of Indo-European and 'Schnurkeramik'] (Prague), 38-40, 49-59.
- Formozov, A. A.
- 1958 *Drevnie istoriko-etnografičeskie oblasti evropejskoj časti SSSR (mezolit, neolit, eneolit)* [The Ancient Historico-Geographical Regions of the European USSR], vol. 5 (Moscow), 17-30.
- Forrer, E.
- 1926 *Forschungen*, vols. 1-2 (Erkner).
- Fourquet, J.
- 1964 "Pourquoi les lois phonétiques sont sans exceptions", in *Proceedings of the Ninth International Congress of Linguists*, Cambridge, Mass., 27-31.8, 1962 (The Hague), 638-643.
- Fraenkel, E.
- 1947 "Zu den slavischen Ortsnamen Holsteins, insbesondere zu den mit *nt*-Suffix", *Revue des études indo-européennes* 4, 271-282.
- 1950 *Die baltischen Sprachen* (Heidelberg).
- 1962-65 *Litauisches etymologisches Wörterbuch* (Heidelberg, Göttingen).
- Franceva, J. P., I. M. D'jakonova, G. F. Il'ina, S. V. Kiseleva, and V. V., Struve, eds.
- 1955 *Vsemirnaja istorija* [World History], vol. 1 (Moscow).
- Friedrich, J.
- 1931 "Hettitisch und kleinasiatische Sprachen", in *Geschichte der indogermanischen Sprachwissenschaft*, vol. 2, 5, 1 (Berlin, Leipzig).
- 1932 *Kleinasiatische Sprachdenkmäler* (Heidelberg).
- 1937 "Verschollene Sprachen des Altertums und ihre Wiedererschliessung", *Neue Jahrbücher* 13, 354-369, 438-453.
- 1939 *Entzifferungsgeschichte der hethitischen Hieroglyphenschrift* (Stuttgart).
- 1941 "Phrygia (Sprache)", in *Realencyclopädie der Altertumswissenschaft* (Stuttgart), s. v. 881-884.
- 1950 *Atti del II convegno internazionale dei linguisti*. Milan, 1-5.9, 1949 (Milan).
- 1952-66 *Hethitisches Wörterbuch*, 3 *Ergänzungshefte* (Heidelberg).
- 1953 "Zur Lesung der hethitischen Bilderschrift", *Archiv Orientalní* 21, 114-139.
- 1960 *Hethitisches Elementarbuch, 1: Kurzgefasste Grammatik*, 2nd ed. (1st edition, Heidelberg, 1940).
- 1969 "Churritisch", in *Handbuch der Orientalistik*, vol. 1, 2, 1-2, 1, *Alt kleinasiatische Sprachen* (Leiden, Köln), 1-30.
- Friedrich, P.
- 1970 *Proto-Indo-European Trees. The Arboreal System of a Prehistoric People* (Chicago, London).
- Frisk, H.
- 1954-70 *Griechisches etymologisches Wörterbuch*, vols. 1-2 (Heidelberg).
- Fuhrmann, H.
- 1940 "Archäologische Grabungen und Funde in Italien und Lybien", *Jahrbuch des Deutschen Instituts mit dem Beiblatt Archäologischer Anzeiger* 56, 362-554 (Berlin).
- Furumark, A.
- 1954 "Ägäische Texte in griechischer Sprache", *Eranos* 52, 18-60.
- 1956 *Linear A und die altkretische Sprache*, vols. 1-2 (Berlin).
- Gallavotti, C.
- 1958 "Il carattere eolico del greco miceneo", *Rivista di filologia* 36, 133-142.
- Gallavotti, C., and A. Sacconi.
- 1963 *Inscriptiones Pythiae ad Mycenaeam aetatem pertinentes* (Rome).
- Gamkrelidze, T. O.
- 1956 *Trudy Instituta jazykoznanija Akademii nauk Gruzinskoj SSR, ser. vost. jaz.* 2, 51-65.
- 1959 "Klinopisnaja sistema akkado-xettskoj grupy i vopros o proischozhenii xettskoj pis'mennosti" [The Cuneiform System of the Akkado-Hittite Group and the Question of the Origin of Hittite Writing], *Vestnik drevnej istorii* 1, 9-19.
- Garašanin, M. V.
- 1958 "Contribution à la connaissance de la civilisation des Dardaniens à l'époque de la Tène", *Živa Antika* 8, 121-133.

- Garibjan, S.
1955 *Erevanskij Gosudarstvennyj Russkij pedagogičeskij institut, Učenyje zapiski* 5, 1-14 (Erevan).
- Gelb, I. J.
1944 *Hurrians and Subarians* (Chicago, Ill.).
1950 "The Contribution of the New Cilician Bilinguals to the Decipherment of the Hieroglyphic Hittite", *Bibliotheca Orientalis* 7, 129-141 (Leiden).
1954 Review of A. J. Van Windekens, *Le pélasgique: essai sur une langue indo-européenne préhellénique*, *Classical Philology* 49, 106-107.
1956 "New Light on Hurrians and Subarians", in *Studi orientalistici in onore di G. I. Della Vida*, vol. 1 (Rome), 378-392.
- Gelb, I. J., and G. Bonfante,
1944 "Hieroglyphic Hittite", *Journal of the American Oriental Society* 65, 169-178 (Chicago).
- Georgiev, E.
1941 "Baltoslavjansko-germanskoto ezikovo rodstvo" [The Balto-Slavic-Germanic Language Relationship], *Izvestija na Seminara po slavjanska filologija* 8 (Sofia).
- Georgiev, G. I.
1961 "Kulturgruppen der Jungstein- und Kupferzeit in der Ebene von Thrazien (Südbulgarien)", in *Actes du Symposium consacré aux problèmes du Néolithique européen*, Prague, 4-9.4. 1960 (Prague), 45-100.
1971 "Die Entwicklung der älteren prähistorischen Kulturen in Südbulgarien", in *L'ethnogenèse des peuples balkaniques* (Sofia), 21-35.
- Georgiev, V. I.
1932 *Indoeuropejskite gutturali* [The Indo-European Gutturals] (Sofia).
1936-38 *Die Träger der kretisch-mykenischen Kultur, ihre Herkunft und ihre Sprache*, vols. 1-2 (Sofia).
1937 "Eine gemeinsame Lauteigentümlichkeit des Albanischen, Phrygischen, Armenischen und das Gutturalproblem", *Zeitschrift für vergleichende Sprachforschung* 64, 104-126.
1938 "Die Inschrift von Ezerovo", *Zeitschrift für vergleichende Sprachforschung* 66, 184-192.
1941 *Vorgriechische Sprachwissenschaft* (Sofia).
1943 *Die sprachliche Zugehörigkeit der Etrusker* (Sofia).
1947 "Une inscription prétendue étéocrétoise", *Revue de philologie* 21, 132-140.
1948 *Contribution à l'étude de la toponymie grecque: noms de lieux prétendus préhelléniques* (Sofia).
1948-49 *Le déchiffrement des inscriptions minoennes* (Sofia).
1950 "L'origine degli Etruschi come problema della storia delle tribù egee", *Studi Etruschi* 20, 101-108.
1955 "Za proixoda na drevnoto naselenie ot severoistočnata čast na Balkanskija poluostrvo" [The Origin of the Ancient Population in the Northeast Part of the Balkan Peninsula], *Izvestija na Arxeologičeskija institut* 19, 305-325.
1955-56 *Lexique des inscriptions créto-mycéniennes. Supplément au lexique. Second supplément au lexique* (Sofia).
1956 "La koiné créto-mycénienne", in *Etudes mycéniennes, Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 3-7.4 (Paris), 1956, 173-188.
1957a *Le déchiffrement des inscriptions crétoises en linéaire A* (Sofia).
1957b *Trakijskijat ezik* [The Thracian Language] (Sofia).
1957c "Zur altkleinasiatischen Hydronymie", *Beiträge zur Namenforschung* 8, 149-161.
1957d "Konceptija ob indoeuropejskix gutturalnyx soglasnyx i eë otryženie na etimologii slavjanskix slov" [The Concept of the IE Gutturals and Its Reflection on the Etymology of Slavic Words], in *Beogradski međunarodni slavistički sastanak* (Beograd), 511-524.
1958a "Balto-slavjanskij, germanskij i indo-iranskij" [Balto-Slavic, Germanic, and Indo-Iranian], *Slavjanskaja filologija* 1, 7-26.
1958b "Die altgriechischen Flussnamen", in *Izsledvanija v čest na D. Dečev* (Sofia), 3-48.
1958c *Văprosi na bălgarskata etimologija* [Questions on Bulgarian Etymology] (Sofia).
1959a "Die Herkunft der Namen der grössten Flüsse der Balkanhalbinsel und ihre Bedeutung zur Ethnogenese der Balkanvölker", *Linguistique Balkanique* 1, 5-16.
1959b "Die altgriechischen Flussnamen 2. Nachträge und Berichtigungen zu den Altgriechischen Flussnamen", *Linguistique Balkanique* 1, 17-27.
1960a "Albanisch, Dakisch-Mysisch und Rumänisch", *Linguistique Balkanique* 2, 1-24.

- 1960b *Bългарска etimologija i onomastika* [Bulgarian Etymology and Onomastics] (Sofia).
- 1960c "Die griechischen Nomina auf -εύς und die baltisch-slavisches Verba auf -áuju/ ujo", *Lingua Posnaniensis* 8, 17-29.
- 1961a "Das Problem der homerischen Sprache im Lichte der kretisch-mykenischen Texte", in *Minoica und Homer* (Berlin), 10-19.
- 1961b "Theiss, Temes, Maros, Szamos", *Beiträge zur Namenforschung* 12, 87-94.
- 1962 *Hethitisch und Etruskisch* (Sofia).
- 1963a "Dunaj, Dunav, Dunäre", in *Studia linguistica in honorem Th. Lehr-Splawinski* (Warsaw, Kraków), 87-90.
- 1963b *Les deux langues des inscriptions crétoises en linéaire A* (Sofia).
- 1963c "Späthethitisch=Altetruskisch", *Linguistique Balkanique* 7, 2, 6-23.
- 1964a "Die dakischen Glossen und ihre Bedeutung zum Studium der dakischen Sprache", *Linguistique Balkanique* 8, 5-14.
- 1964b "Etruskisch ist Späthethitisch", *Die Sprache* 10, 159-167.
- 1964c "On the Present State of Indo-European Linguistics", in *Proceedings of the Ninth International Congress of Linguists*, Cambridge, Mass., 27-31.8, 1962 (the Hague), 738-742.
- 1964d *Vokalnata sistema v razvoja na slavjanskite ezici* [The Vowel System in the Development of Slavic Languages] (Sofia).
- 1965a "Das hethitisch-luwische Deminutivsuffix -ant-", *Archiv Orientalni* 33, 175-182.
- 1965b "Die indoeuropäische eH₂y-Klasse", in *Symbolae linguisticae in honorem G. Kurylowicz* (Wrocław, Warszawa, Kraków), 81-87.
- 1965c "Le dace comme substrat de la langue roumaine", *Revue roumaine de linguistique* 10, 75-80.
- 1966a "Die Bilingue von Pyrgi als Beweis für die hethitische Herkunft der etruskischen Sprache", *Linguistique Balkanique* 11, 1, 25-67.
- 1966b "Die Deutung der altertümlichen thrakischen Inschrift aus Kjolmen", *Linguistique Balkanique* 11, 1, 9-23.
- 1966c "Die europäische Mrakohydronymie und die Frage nach der Urheimat der Indoeuropäer", in *Proceedings of the Eighth International Congress of Onomastic Sciences*, Amsterdam, 4-9.4, 1964 (The Hague, Paris), 188-195.
- 1966d *Les problèmes fondamentaux de la linguistique balkanique* (Sofia).
- 1966e "Mnim predindoeuropejski substrat v balkanskite ezici", [The Imaginary pre-IE Substrate in the Balkan Languages], *Bългарски ezik* 16, 294-298.
- 1966f "Mycénien et homérique: le problème du digamma", in *Proceedings of the Cambridge Colloquium on Mycenaean Studies*, Cambridge, 7-12.4, 1965 ed. by L. R. Palmer and J. Chadwick (Cambridge), 104-124.
- 1966g "Was stellt die Pelasgertheorie dar?", *Lingua* 16, 263-273.
- 1967a "Die hethitische Herkunft der etruskischen Morphologie", *Studi Micenei ed Egeo-anatolici* 3, 55-91.
- 1967b "Hethitisch, Lydisch, Etruskisch", *Linguistique Balkanique* 11, 2, 5-20.
- 1967c "L'état actuel du déchiffrement des textes en linéaire A", in *Congresso di Micenologia*, Rome, 27.9-3.10, 1967, vol. 1 (Rome), 355-379.
- 1968a "Illyrier, Veneter und Ursclaven", *Linguistique Balkanique* 13, 1, 5-13.
- 1968b *La linguistique balkanique et la langue roumaine* (Bucharest).
- 1968c "Zur hethitischen Onomastik", *Archiv Orientalni* 36, 189-199.
- 1969a "Die Laryngaltheorie und die Herkunft der hethitischen hi-Konjugation", *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 22, 546-576.
- 1969b "Etruskologie und Neotrombettianismus", *Acta Antiqua* 17, 89-104 (Budapest).
- 1969c "La stratification principale des toponymes en Grèce ancienne", in *Proceedings of the Ninth International Congress of Onomastic Sciences*, London, 3-8.9, 1966 (Louvain), 227-235.
- 1969d *Osnovni problemi na slavjanskata diaxronna morfologija* [Fundamental Problems in Slavic Diachronic Morphology] (Sofia).
- 1970 "L'origine du génitif pronominal hittite en -el", *Revue hittite et asianique* 28, 18-21.
- 1970-71 *Etruskische Sprachwissenschaft*, vols. 1-2 (Sofia).
- 1971a "Die Herkunft der hethitisch-luwischen Dativ-Lokativendungen des Singulars", *Indogermanische Forschungen* 76, 59-65.
- 1971b "La langue et l'origine des Etrusques", *Etudes Balkaniques* 4, 55-81.
- 1971c "L'ethnogenèse de la péninsule Balkanique d'après les données linguistiques", in *L'ethnogenèse des peuples balkaniques* (Sofia) 155-170.

- 1972a "Le traitement des sonantes voyelles indo-européennes et le problème du caractère de la langue mycénienne", in *Acta Mycenaea, Proceedings of the Fifth International Colloquium on Mycenaean Studies*, Salamanca, 30.3-3.4, 1970, vol. 2 (Salamanca), 361-379.
- 1972b "The Earliest Ethnological Situation of the Balkan Peninsula as Evidenced by Linguistic and Onomastic Data", in *Aspects of the Balkans*, ed. by H. Birnbaum and S. Vryonis (The Hague-Paris), 50-65.
- 1972c "La thracologie: état actuel", *Etudes Balkaniques*, VIII, 5-15.
- 1972d "Les Illyriens et leurs voisins", *Studia Albanica*, IX, 235-239.
- 1972e "La Grèce et les Indo-Européens", *Acta of the 2nd International Colloquium of Aegean Prehistory*, 24-38 (Athens).
- 1973a "Die ethnischen Verhältnisse im alten Nordwestkleinasien", *Linguistique Balkanique*, XVI, 1, 5-12.
- 1973b "Die westhethitische Herkunft des Etruskischen und die Kritik", *Linguistique Balkanique*, XVI, 2, 13-34.
- 1973c "Raetisch oder Nodetruskisch", *Orbis*, 22, 232-247 (Belgique).
- 1973d "The arrival of the Greeks in Greece: the linguistic evidence", *Bronze Age Migrations in the Aegean* (Archaeological and linguistic problems in Greek prehistory), 243-254 (London).
- 1974 "Etruskisch und Hethitisch. Ein Vergleich der bekannten Tatsachen der etruskischen Grammatik", *Linguistique Balkanique*, XVII, 1, 5-40.
- 1975a "Ein Versuch zur Deutung der griechisch-karischen Bilinguis?", *Kadmos*, XIV.
- 1975b "Indoevropskoe jazykoznanie segodnja", *Voprosy jazykoznanija*, 5 (Moscow).
- 1976 "Le déchiffrement du texte sur le disque de Phaistos", *Linguistique balkanique*, XIX, 2, 5-47.
- 1977a "Probleme der historischen Lautlehre des Albanischen", *Akten des Internationalen albanologischen Kolloquiums*, Innsbruck 1972, 223-234.
- 1977b *Trakite i texnijat ezik* [Les Thraces et leur langue] (Sofia).
- Ghirshman, R.
- 1976 "L'Iran et la migration des Indo-aryens et des Iraniens", *Académie des Inscriptions et Belles-Lettres, Comptes rendus* 614-620.
- 1977 *L'Iran et la migration des Indo-aryens et des Iraniens* (Leyden).
- Gindin, L. A.
- 1959 "Obzor literatury po pelagskom jazyku" [A Survey of the Literature on 'Pelagian'], *Voprosy jazykoznanija* 5, 105-114.
- 1967 *Jazyk drevnejšego naselenija juga Balkanskogo poluostrova* [The Language of the Most Ancient Population of the Southern Part of the Balkan Peninsula] (Moscow).
- Glaesser, E.
- 1939 *Einführung in die rassenkundliche Sprachforschung* (Heidelberg).
- Godart, L., and Anna Sacconi
- 1978 *Les tablettes en linéaire B de Thèbes* (Rome).
- Goetze, A.
- 1953 "The Theophorous Elements in the Anatolian Proper Names from Cappadocia", *Language* 29, 263-277.
- 1954a Review of J. Friedrich, "Kurzgefasste kritische Sammlung der Deutungen hethitischer Wörter", *Language* 30, 401-405.
- 1954b "Some Groups of Ancient Anatolian Proper Names", *Language* 30, 349-359.
- 1957 *Kleinasien*, 2nd ed. (= *Handbuch des Altertumswissenschaft: Kulturgeschichte des alten Orients*) (Munich).
- Goold, G. P., and M. Pope.
- 1955 *The Cretan Linear A Script* (Cape Town).
- Gordon, C. H.
- 1966 *Evidence of the Minoan Language* (Ventnor, New Jersey).
- Gornung, B. V.
- 1950 "Baltijskie jazyki" [The Baltic Languages], in *Bol'saja sovetskaja enciklopedija*, 2d. ed., vol. 4 (Moscow), 154.
- 1954 Review of V. I. Georgiev, "Problemy minojškogo jazyka" [Problems in the Minoan Language], *Voprosy jazykoznanija* 2, 107-116.
- 1956 "Problema rasprostraneniya indoevropskoj reči v doistoričeskoj epoxe" [The Problem of the IE Language in Prehistory], in *Tezi i doklady na sessii Otdelenija istoričeskix nauk*, Moscow, 11-16.5, 1955 (1955) (Moscow), 16-21.
- Graur, A.
- 1958 "Neolingvističeskaja škola", *Revue de linguistique* 3, 121-134.

- Grégoire, H.
1938 "Caballus et onus", *Byzantion* 13, 287-290.
- Grimm, J.
1819 *Deutsche Grammatik*, vol. 1 (Göttingen).
1848 *Geschichte der deutschen Sprache* (Berlin).
- Grinbaum, N. S.
1959 "Krito-mikenskie teksty i drevnegrečeskie dialekty" [The Creta-Myceanaean Texts and the Ancient Greek Dialects], *Voprosy jazykoznanija* 6, 78-86.
- Grošelj, M.
1955 "O posesivnem adjektivu v slovanščini in toharščini", [On the Possessive Adjective in Slavic and Tocharian], *Slavistična revija* 8, 1-2 priloga, *Linguistika*, 8-10.
- Grumach, E.
1968 "K proizhodeniju festskego diska" [On the Origin of the Discus of Phaistos], *Vestnik drevnej istorii* 2, 14-25.
- Guchman, M. M.
1954 "Primečaniya k russkomu perevodu knigi E. Prokoš" [Notes on the Russian Translation of the Book by E. Prokosh], in *Sravnitel'naja grammatika germanskix jazykov* 1 (Moscow).
- Güntert, H.
1915 "Eine etymologische Deutung von griech. ἄρθροπος", in *Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Phil.-hist. Kl.*, 10 Abh. (Heidelberg).
1934 *Der Ursprung der Germanen* (Heidelberg).
- Gurney, O. R.
1952 *The Hittites* (London).
1962 *Anatolia c. 1750-1600 BC* (=The Cambridge Ancient History 2, 6) (Cambridge).
- Gusmani, R.
1959 *Studi Frigi* (Florence).
1960a "Concordanze e discordanze nella flessione del licio c del luvio", in *Istituto lombardo di Lettere* 94, 512-519.
1960b "Masnes e il problema della preistoria lidia", *La parola del passato* 15, 326-335.
1964 *Lydisches Wörterbuch* (Heidelberg).
1965 "Contributi allo studio comparativo delle lingue anatoliche", *Annali, sezione linguistica* 6, 69-88 (Naples).
1968a "Die neuen lydischen Funde seit 1964", in *Studien zur Sprachwissenschaft und Kulturkunde (Gedenkschrift für W. Brandenstein)*, (Innsbruck), 49-58.
1968b "Zur Deutung einiger milyischen Wörter", *Archiv Orientalni* 36, 1-12.
- Haas, O.
1939a "Über die phrygischen Sprachdenkmäler und ihr Verhältnis zum Armenischen", *Handes Amsorya* 7-12, 225-35.
1939b "Zur Erklärung der neuphrygischen Inschriften", *Wiener Zeitschrift der Kunde des Morgenlandes* 45, 121-134.
1951 "Substrat et mélange de langues en Grèce ancienne", *Lingua Posnaniensis* 3, 63-95.
1957 "Die sprachgeschichtliche Stellung des Phrygischen", in *Ezikovedski izsledvanija v čest na S. Mladenov* (Sofia) 451-467.
1959a "Das Oel und die ersten Indoeuropäer Griechendlands", *Lingua Posnaniensis* 7, 54-76.
1959b "Die Lehre von den indogermanischen Substraten in Griechendland", *Linguistique Balkanique* 1, 29-56.
1960a "Die phrygische Sprache im Lichte der Glossen und Namen", *Linguistique Balkanique* 2, 25-68.
1960b "Neue spätphrygische Texte", *Die Sprache* 6, 9-32.
1961 "Armenier und Phryger", *Linguistique Balkanique* 3, 2, 29-65.
1962 *Messapische Studien* (Heidelberg).
1966 *Die phrygischen Sprachdenkmäler* (Sofia).
1970 "Das Problem der Herkunft der Phryger und ihrer Beziehungen zu den Balkanvölkern", *Acta Antiqua* 18, 316-329.
- Hajdú, P.
1952-53 "K ètnogenezu vengerskego naroda" [On the Ethnogenesis of the Hungarian People], *Acta linguistica* (Budapest).
- Hall, R. A.
1963 *Idealism in Romance Linguistics* (Ithaca, New York).
1966 *Linguistique traditionnelle et linguistique structurale* (Bucharest).

- Hamp, E.
1954 "Relationship of Venetic within Italic", *American Journal of Philology* 75, 183-191.
- Hansen, K.
1959 "Puti i celi strukturalizma" [The Methods and Goals of Structuralism], *Voprosy jazykoznanija* 4, 91-105.
- Harmatta, J.
1964 "Das Pelasgische und die alten Balkansprachen", *Linguistique Balkanique* 9, 1, 41-47.
- Hassencamp, R.
1876 *Über den Zusammenhang des tectoslawischen und germanischen Sprachstammes* (Leipzig).
- Hauschild, R.
1962 *Über die frühesten Arier im alten Orient* (Berlin).
- Havet, L.
1875 "La question des deux k ario-européens", *Mémoires de la Société de linguistique* 2, 261-276.
- Heinz, A.
1965 "Zur Struktur des Sprachsystems", *Bulletin de la Société linguistique polonaise* 26, 51-59.
- Hencken, H.
1955 "Indo-European Languages and Archaeology", *American Anthropological Association* 57, No. 6, Part 3, No 84.
- Hermann, E.
1907 "Über das Rekonstruieren", *Zeitschrift für vergleichende Sprachforschung* 41, 1-64.
1922 Review of E. Sieg and W. Siegling, *Tocharische Sprachreste, Zeitschrift für vergleichende Sprachforschung* 50, 296-314.
1923 *Silbenbildung im Griechischen und in den anderen indogermanischen Sprachen* (Göttingen).
- Hestermann, F.
1954 Review of A. J. Van Windekens, *Le pélasgique, essai sur une langue européenne préhellénique*, *Deutsche Literaturzeitung* 75, 325-326.
- Heubeck, A.
1956 "Pamphylich 'Απελαγός'", *Beiträge zur Namenforschung* 7, 8-16.
1958 Review of W. Merlingen, "Das 'Vorgriechische' und die sprachwissenschaftlich-vorhistorischen Grundlagen", *Indogermanische Forschungen* 64, 196-200.
1959a Review of Olivier Masson et Jean Yoyotte, *Objets pharaoniques d'inscription carienne*, *Gnomon* 31, 332-326.
1959b *Lydiaka* (Erlangen).
1961 *Praegraeca* (Erlangen).
1969 "Lydisch", in *Handbuch der Orientalistik* vol. 1, 2, 1-2, 2 (*Attkleinasiatische Sprachen*) (Leiden, Köln), 397-427.
- Heurgon, J.
1969 "Inscriptions étrusques de Tunisie", in *Académie des Inscriptions et Belles-Lettres, Comptes rendus* (Paris), 526-551.
- Hiersche, R.
1970 *Grundzüge der griechischen Sprachgeschichte* (Wiesbaden).
- Hirt, H.
1898 "Die sprachliche Stellung des Illyrischen", in *Beiträge zur alten Geschichte und Geographie (Festschrift für H. Kiepert)* (Berlin), 179-88.
1899 "Die Lösung der Gutturalfrage im Indogermanischen", *Beiträge zur Kunde der indogermanischen Sprachen* 24, 218-291.
1905-06 "Untersuchungen zur indogermanischen Altertumskunde", *Indogermanische Forschungen, Anzeiger* 18, 55-95.
1905-07 *Die Indogermanen*, vols. 1-2 (Strassburg).
1921-37 *Indogermanische Grammatik*, vols. 1-7 (Heidelberg).
- Hirt, H., and H. Arntz.
1939 *Die Hauptprobleme der idg. Sprachwissenschaft* (Halle, Saale).
- Hjelmlev, L.
1922 *Principes de grammaire générale* (Copenhagen).
- Hoenigswald, H. M.
1943 Review of V. I. Georgiev, *Vorgriechische Sprachwissenschaft, Language* 19, 269-272.
1946 "Sound Change and Linguistic Structure", *Language* 22, 138-43.
1950 "The Principal Step in Comparative Grammar", *Language* 26, 357-64.

- 1960 *Language Change and Linguistic Reconstruction* (Chicago, Ill.).
Hoffmann, O.
1891-98 *Die griechischen Dialekte* (Göttingen).
1906 *Die Makedonen, ihre Sprache und ihr Volkstum* (Göttingen). •
Hoffmann, O., and A. Debrunner
1953 *Geschichte der griechischen Sprache*, 3rd ed. (Berlin).
Hoffman, O., and A. Scherer.
1969 *Geschichte der griechischen Sprache*, vol. 1 (Berlin).
Hofmann, E.
1955 *Zeitschrift für vergleichende Sprachforschung* 73, 128-139.
Hoffman, J. B.
1950 *Etymologisches Wörterbuch des Griechischen* (Munich).
Holub, J., and F. Kopečný
1959 *Etymologický slovník jazyka českého* [An Etymological Dictionary of the Czech Language] (Prague).
Homo, L.
1938 *L'Italie primitive* (Paris).
Horálek, K.
1955 *Úvod do studia slovanských jazyků* [An Introduction to the Study of Slavic Languages] (Prague).
Houwink ten Cate, P. H. J.
1961 *The Luwian Population Groups of Lycia and Cilicia Aspera during the Hellenistic Period* (Leiden).
Hübschmann, H.
1877 "g', g'h im Sanskrit und Iranischen", *Zeitschrift für vergleichende Sprachforschung* 23, 384-400.
Hubschmid, J.
1948-49 Review of K. Bouda, *Baskisch-kausalische Etymologien*, *Vox Romanica* 10, 309-313 (Bern).
1950 "Vorindogermanische und jüngere Wortschichten in den romanischen Mundarten der Ostalpen", *Zeitschrift für romanische Philologie* 66, 1-94 (Tübingen).
1953 *Sardische Studien* (Bern).
1960a *Mediterrane Substrate* (Bern).
1960b "Substratprobleme", *Vox Romanica* 19, 124-179, 245-303 (Bern).
1962 "Indogermanische, besonders pelagische und panmediterrane Etymologien", *Annali, Sezione linguistica*, 4, 89-98 (Napoli).
1964 "Substrate in den Balkansprachen", in *Die Kultur Südosteuropas, ihre Geschichte und ihre Ausdrucksformen* (Wiesbaden), 90-98.
Huxley, G. L.
1960 "Crete and the Luwians", *Minutes of the London Mycenaean Seminar*, 18. 10, 1961 (London), 9, 12, 221-225.
Ivanov, V. V.
1954a Review of J. Kuryłowicz, *L'accentuation des langues indo-européennes*, *Voprosy jazykoznanija* 4, 125-136.
1954b *Genealogičeskaja klassifikacija jazykov i ponjatie jazykovogo rodstva* [Genealogical Language Classification and the Notion of Language Relationship] (Moscow).
1955a Review of W. Merlingen, *Das "Vorgriechische" und die sprachwissenschaftlichen-vorhistorischen Grundlagen*, *Voprosy jazykoznanija* 6, 124-129.
1955b *Indoeuropejskie korni v klinopisnom xetitskom jazyke* [IE Roots in Cuneiform Hittite] (Moscow).
1957 "O značenii xetitskogo jazyka dlja sravnitel'no-istoričeskogo issledovanija slavjanskix jazykov" [On the Significance of Hittite for the Comparative Study of Slavic], *Voprosy slavjanskogo jazykoznanija* 2, 3-28.
1959 "Toxarskaja parallel' k slavjanskim umenšitel'nim formam" [Tocharian Parallels to Slavic Diminutives], *Slavjanskaja filologija* 2, 58-63 (Moscow).
1965a *Toxarskie jazyki* [The Tocharian Languages] (Moscow).
1965b *Obščeeindoeuropejskaja, praslavjanskaja i anatoličeskaja jazykovye sistemy* [The Common IE, Protoslavic and Anatolian Language Systems] (Moscow).
Ivanov, V. V., and V. N. Toporov
1958 "O postanovke voprosa o drevnejšix otnošenijax baltijskix i slavjanskix jazykov" [On the Question of the Oldest Relations between Baltic and Slavic] (Moscow).

- Jakobson, R. O.
1958 "Typological Studies and their Contribution to Historical Comparative Linguistics", in *Proceedings of the 8th International Congress of Linguistics*, Oslo, 5-9.8, 1957 (Oslo).*
- Joki, A. J.
1973 *Uralier und Indogermanen. Die älteren Berührungen zwischen uralischen und indogermanischen Sprachen* (Helsinki).
- Jokl, N.
1917 "Albanisch", in *Geschichte der indogermanischen Sprachwissenschaft*, vols. 2, 3 (Strassburg).
1923 *Linguistisch-kulturhistorische Untersuchungen aus dem Bereiche des Albanischen* (Berlin, Leipzig).
1924 "Albaner" in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 1 (Berlin), 84-96.
1926 "Illyrier", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 6 (Berlin), 38-50.
1927 "Phryger", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 19 (Berlin), 141-149.
1929 "Thraker", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 13 (Berlin), 25-29.
1937 "Ein Beitrag zur Lehre von der alb. Vertretung der indogermanischen Labiovelare", in *Mélanges Pedersen* (Copenhagen), 127-161.
1963 "Die Verwandtschaftsverhältnisse des Albanischen zu den übrigen idg. Sprachen", *Die Sprache* 9, 113-156.
- Jones, D. M.
1953 "Etymological Notes", *Transactions of the Philological Society* 43-51 (London).
1954 "Essai sur une langue indo-européenne préhellénique", *American Journal of Philology* 75, 217-219.
- Jones, T. B.
Review of A. J. Van Windekens, *Le pélasgique: un essai sur une langue européenne préhellénique*, *American Journal of Philology* 75, 217-218.
- Kakabadze, S. S.
1955 "O tak nazyvaemyx 'xettsko-iberijskix' jazykax" [On the so-called 'Hittite-Iberian' Languages], *Voprosy jazykoznanija* 4, 68-72.
- Kalima, T.
1951 "Die Struktur der russischen Ortsnamen fremden Ursprunges", in *Troisième Congrès international de toponymie et d'anthroponymie*, Bruxelles, 15-19.8, 1949 (Louvain), 437-442.
- Kalleris, J. N.
1954 *Les anciens Macédoniens* (Athens).
- Kamm, R.
1965 "Über den Lautstand der minoischen Linear A-Schrift an Hand einiger Ritualtext- und Haghia Triada-Wörter", *Orbis* 14, 410-422.
- Kammenhuber, A.
1956 "Beobachtungen zur hethitisch-luvischen Sprachgruppe", *Revue hittite et asianique* 14(58), 1-21.
1959a "Das Palaische: Texte und Wortschatz", *Revue hittite et asianique* 17, 64, 1-92.
1959b "Protohittisch-Hethitisches", *Münchener Studien zur Sprachwissenschaft* 14, 63-69.
1959c "Zur hethitischen Sprachgruppe", *Zeitschrift für vergleichende Sprachforschung* 76, 1-14.
1968a *Die Arier im Vorderen Orient* (Heidelberg).
1968b "Die Sprachen des vorhellenischen Kleinasien in ihrer Bedeutung für die heutige Indogermanistik", *Münchener Studien zur Sprachwissenschaft*, 24, 55-123.
1969a "Das Hattische", in *Handbuch der Orientalistik* vol. 1, 2, 1-2, 2, *Altkleinasiathe Sprachen* (Leiden, Köln), 428-564.
1969b "Hethitisch, Palaisch, Luwisch und Hieroglyphenluwisch", in *Handbuch der Orientalistik* 1, 2, 1-2, 2, *Altkleinasiathe Sprachen* (Leiden, Köln), 119-357.
1975 "The Linguistic Situation of the 2nd Millennium B.C. in Ancient Anatolia", *Journal of the Royal Asiatic Society* 2, 116-120.
- Kapancjan, G.
1954 "Palajskij jazyk" [Palaian], *Archiv Orientální* 22, 501-514.
1956a *Istoriko-lingvističeskie raboty. K načalnoj istorii armjan. Drevnjaja Malaja Azija* [Historico-linguistic Works. On the Oldest History of the Armenians, Old Asia Minor] (Erevan).
1956b "Suffiksy i suffigirovanie slova v toponomastike drevnoj Maloj Azii" [Suffixes and Suffixed Words in the Toponymy of Ancient Asia Minor], in *Istoriko-lingvističeskie raboty* (Erevan), 411-462.

- Karo, G.
 1925 "Altetruskische Baukunst", *Die Antike* 1 (Berlin, Leipzig), 213-243.
 Karstien, C.
 1936 "Indogermanisch und Germanisch", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 2 (Heidelberg), 297-327.
 1939 *Historische deutsche Grammatik* (Heidelberg).
 Katičić, R.
 1963 Review of V. I. Georgiev, *Issledovanija po sravnitel'noistoričeskomu jazykoznaniju*, *Filologija* 4, 265-270 (Zagreb).
 1964a Review of A. Heubeck, *Praegraeca*, *Kratylos* 9, 27-31.
 1964b "Illyrii proprie dicti", *Živa Antika* 13-14, 87-98.
 1964c "Namengebiete im römischen Dalmatien", *Die Sprache* 10, 23-33.
 1964d "Suvremena istraživanja o jeziku starosjedilaca ilirskih provincija" [Contemporary Research on the Language of the Ancient Illyrian Provinces], in *Naučno društvo SR Bosne i Hercegovine 4 (=Centar za balkanološka ispitivanja 1)*, 9-58 (Sarajevo).
 1968 "Liburner, Pannonier und Illyrier", in *Studien zur Sprachwissenschaft und Kulturkunde* (Innsbruck), 363-370.
 1970 *A Contribution to the General Theory of Comparative Linguistics* (The Hague, Paris).
 Kellogg, R. I.
 1927 "Some Indications of the Eastward Route of the Tocharians", *Journal of the American Oriental Society* 47, 4, 356.
 Kiparsky, V.
 1934 *Die gemeinslavischen Lehnwörter aus dem Germanischen* (Helsinki).
 1958 "Materialy k IV Meždunarodnomu s'ezdu slavistov" [Materials of the Fourth International Congress of Slavists], *Voprosy jazykoznanija* 1, 50.
 Klimov, G. A.
 1963 "Ob etimologičeskoj metodike Karla Boudy" [On the Etymological Methods of C. Bouda], *Etimologija* 268-274 (Moscow).
 1964 *Etimologičeskij slovar' kartvel'skix jazykov* [An Etymological Dictionary of the Kartvelian Languages] (Moscow).
 1970 "O vnešnix svjazax kartvel'skix jazykov" [On the External Relationships in the Cartvelian Languages], *Voprosy jazykoznanija* 6, 36-45.
 Kluge, F., and A. Götze
 1957 *Etymologisches Wörterbuch der deutschen Sprache*, 17th ed. (Berlin, Leipzig).
 Knabe, G. S.
 1959 "Vopros s sootnošenii arxeologičeskoj kul'tury i etnosa v sovremennoj zarubežnoj literature" [The Question of the Interrelation of Archaeological Culture and Ethnos in Contemporary Foreign Literature], *Sovetskaja Arxologija* 3, 243-257.
 Koroljuk, V. D., I. S. Miller, and P. N. Tret'jakov, eds.
 1954 *Istoriya Pol'shi* [The History of Poland] (Moscow).
 Kosven, M. O.
 1953 *Očerki istorii pervobytnoj kul'tury* [Outlines of Primitive Culture] (Moscow).
 Krahe, H.
 1943a "Die Indogermanisierung Griechenlands", *Antike, Alte Sprachen und Deutsche Bildung* 1942, 2-13.
 1943b *Indogermanische Sprachwissenschaft* (Berlin).
 1947 "Die illyrische Namengebung", *Würzburger Jahrbücher für die Altertumswissenschaft* 1, 220-245.
 1950 "Das Venetische", in *Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Phil.-hist. Kl.* (Heidelberg).
 1954 *Sprache und Vorzeit* (Heidelberg).
 1955 *Die Sprache der Illyrier*, vol. 1 (Wiesbaden).
 1957a "Die Behandlung des idg. *ō* im Illyrischen", in *Studia linguistica in honorem S. Mladenov* (Sofia), 469-476.
 1957b *Vorgeschichtliche Sprachbeziehungen von den baltischen Ostseeländern bis zu den Gebieten um den Nordteil der Adria* (Wiesbaden).
 1961 "Der Flussname Günz", in *Eranion, Festschrift für H. Hammel* (Tübingen), 63-68.
 Kraiker, W.
 1939a "Nordische Einwanderungen in Griechenland", *Die Antike* 15, 195-230 (Berlin, Leipzig).
 1939b "Die Einwanderung der Nordstämme nach Griechenland", *Rasse* 5, 369-382 (Leipzig, Berlin).

- Krause, W.
 1948-51 "Zu einigen tocharischen Personalendungen", *Zeitschrift für vergleichende Sprachforschung* 69, 150-164.
 1955 "Tocharisch", in *Handbuch der Orientalistik*, vol. 4, 3 ed. by B. Speeler (Leiden, Köln).
 1964 "Zum Namen des Lachses", *Nachrichten der Akademie der Wissenschaften in Göttingen, Phil.-hist. Kl.* 4, 83-98.
 Krause, W., and W. Thomas
 1952 *Westtocharische Grammatik* (Heidelberg).
 1960 *Tocharisches Elementarbuch*, vol. 1 (Heidelberg).
 Kretschmer, P.
 1896 *Einteilung in die Geschichte der griechischen Sprache* (Göttingen).
 1907 "Zur Geschichte der griechischen Dialekte. Ionier und Achäer", *Glotta* 1, 9-59.
 1925 "Die protindogermanische Schicht", *Glotta* 14, 300-319.
 1926 "Varuna und die Urgeschichte der Inder", *Wiener Zeitschrift für die Kunde des Morgenlandes* 33, 1-22.
 1927 *Sprache*, 3rd ed. (Leipzig, Berlin).
 1931 "χθών", *Glotta* 20, 65-67.
 1934a "Lautverschiebung im Griechischen", *Glotta* 23, 1-17.
 1934b "Literaturberichte für die Jahre 1931 und 1932", *Glotta* 22, 193-269.
 1935 "Zum Balkan-Skythischem", *Glotta* 24, 1-56.
 1938 "Literaturbericht für das Jahr 1935", *Glotta* 27, 1-40.
 1939 "Die Stellung der lykischen Sprache", *Glotta* 27, 256-267; 28, 101-116.
 1940-43 "Die vorgriechischen Sprach- und Volksschichten", *Glotta* 28, 231-279; 30, 84-218, 244-246.
 1942 "Die tyrrhenischen Inschriften der Stèle von Lemnos", *Glotta* 29, 89-98.
 1946 "Die Inschriften von Praesos und die eteokretische Sprache", *Anzeiger, Phil.-hist. Kl., Akademie der Wissenschaften* 7, 81-103 (Vienna).
 1949 "Die ältesten Sprachschichten auf Kreta", *Glotta* 30, 1-20, 127.
 1953 "Die Leleger und die ostmediterrane Urbevölkerung", *Glotta* 32, 161-204.
 Krogmann, W.
 1955-56 "Das Buchenargument", *Zeitschrift für vergleichende Sprachforschung* 72, 1-16; 73, 1-12.
 Kronasser, H.
 1956 *Vergleichende Laut- und Formenlehre des Hethitischen* (Heidelberg).
 1957 "Zum Bildhethitischen", *Archiv Orientalni* 25, 513-524.
 1960 "Kolo- 'gross'", *Die Sprache* 6, 172-178.
 1962 "Zum Stand der Illyristik", *Linguistique Balkanique* 4, 5-23.
 1962 *Etymologie der hethitischen Sprache*, vols. 1-2 (Wiesbaden).
 Ktistopoulos, C. D.
 1956 "Relations entre linéaire A et linéaire B", in *Etudes mycéniennes. Actes du Colloque internationale sur les textes mycéniens*, Gif-sur-Yvette, 3-7.4, 1956 (Paris), 189-191.
 KUB=Keilschrifturkunde Boghazköi, vol. 1- (Berlin, 1921-).
 Kühn, H.
 1934 "The Indo-Europeans", in *Proceedings of the First International Congress of Prehistoric and Protohistoric Sciences*, Oxford, London, 1-6.8, 1932 (Oxford, London), 237-248.
 Kurylowicz, J.
 1927 "ə indo-européen et h hittite", in *Symbolae grammaticae in honorem I. Rozwadowski* vol. 1 (Kraków).
 1935 *Eludes indo-européennes*, vol. 1 (Kraków).
 1938 "Les problèmes de la phonétique indo-européenne", in *Actes du IV^e Congrès international des linguistes*, Paris, 1936, 63-64.
 1952 *L'accentuation des langues indo-européennes* (Kraków).
 1956 *L'apophonie en indo-européen* (Wrocław).
 1958 "O baltoslavjanskom jazykovom edinstve" [On the Balto-Slavic Language Unity], *Voprosy slavjanskogo jazykoznanija* 3, 14-26.
 1964 *The Inflectional Categories of Indo-European* (Heidelberg).
 1968 "Akzent, Ablaut", in *Indogermanische Grammatik*, vol. 2 (Heidelberg).
 Kuxarenko, U. V.
 1968 *Poles'e* (Moscow).

- Lacombe, G.
1937 "Structure de la langue basque", in *Conférences de l'Institut de linguistique de l'Université de Paris* 5, 13-18 (Paris).
- Lacombe, G., and R. Lafon
1936 "Indo-européen, basque et ibère", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 2 (Heidelberg), 109-123.
- Ladd, C. A.
1964 "The Nature of Sound Change", in *Proceedings of the Ninth International Congress of Linguists*, Cambridge, Mass., 27-31.8, 1962 (The Hague), 650-57.
- Lafon, R.
1947 "L'état actuel du problème des origines de la langue basque", *Gernica, Eusko-Jakiniza (Revue des études basques)* 1, 37-49, 151-163, 505-524.
1950-51 "Les origines de la langue basque", in *Conférences de l'Institut de linguistique de l'Université de Paris* 10, 59-81 (Paris).
1951-52 "Concordances morphologiques entre le basque et les langues caucasiques", *Word* 7 (1951), 227-244; 8 (1952), 80-94.
1952a *Etudes basque et caucasique* (Salamanca).
1952b "Les écritures anciennes en usage dans la péninsule ibérique d'après des travaux récents", *Bulletin Hispanique* 54, 165-183.
- Lane, G. S.
1949 "On the Present State of Indo-European Linguistics", *Language* 25, 333-342.
1958 "The Present State of Tocharian Research", in *Proceedings of the Eighth International Congress of Linguists*, Oslo, 5-9.8, 1957 (Oslo), 252-261.
1960 "The IE Labiovelars in Tocharian", in *Indogermanen, Festschrift für W. Krause* (Heidelberg), 72-79.
1965 "The Tocharian Verbal Stems in -tk-", *Journal of the American Oriental Society* 85, 1, 66-74.
1966 "On the Interrelationship of the Tocharian Dialects", in *Ancient Indo-European Dialects*, ed. by H. Birnbaum and J. Puhvel (Berkeley and Los Angeles), 213-233.
1968 "The Beech Argument", *Zeitschrift für vergleichende Sprachforschung* 81, 187-212.
- Lang, M.
1958 "To the Mycenaean Inscriptions", *The American Journal of Archaeology* 48, 190-198.
- Laroche, E.
1950 "Problèmes de la linguistique asianique", in *Conférences de l'Institut de linguistique* (Paris).
1956 Review of H. Kronasser, "Vergleichende Laut- und Formenlehre des Hethitischen", *Bulletin de la Société de linguistique* 52, 2, 25-30.
1957 "Notes de toponymie anatolienne", in *Gedenkschrift P. Kretschmer*, vol. 2 (Wiesbaden, Vienna), 1-8.
1957-67 "Comparaison du louvite et du lycien", *Bulletin de la Société de linguistique* 53, 159-197; 55, 155-185; 60, 46-66.
1959 *Dictionnaire de la langue louvite* (Paris).
1961 "Études de toponymie anatolienne", *Revue hittite et asianique* 69, 59-98.
1962 "Un 'ergatif' en indo-européen d'Asie Mineure", *Bulletin de la Société de linguistique* 57, 23-43.
1963 "Études lexicales et étymologiques sur le hittite", *Bulletin de la Société de linguistique* 58, 58-80.
1966 *Les noms des Hittites* (Paris).
1972 "Linguistique asianique", in *Acta Mycenaea, Proceedings of the Fifth International Colloquium on Mycenaean Studies*, Salamanca, 30.3-3.4, 1970 (Salamanca), 112-135.
1974 "La stèle trilingue récemment découverte au Létôon de Xanthos: le texte lycien", *Académie des Inscriptions & Belles Lettres, Comptes rendus*, 115-125.
- Laumonier, A.
1958 *Les cultes indigènes en Carie* (Paris).
- Lebel, P.
1956 *Principes et méthodes d'hydronymie française* (Paris).
- Lehmann, W. P.
1962 *Historical Linguistics, an Introduction* (New York).
1966 *Proto-Indo-European Phonology* (Austin, Texas).
- Lehr-Splawinski, T.
1946 *O pochodzeniu i praojczyźnie słowian* [On the Origin and the Primitive Home of the Slavs] (Poznań).
1954 *Pol'skij jazyk* [The Polish Language] (Moscow).

- 1955 "Novaja popytka osvešćenija problemy proisxoždenija slavjan' [A New Attempt to Explain the Problems of the Origins of the Slavs], *Voprosy jazykoznanija* 1, 152-161.
- 1958 "Baltoslavjanskaja jazykovaja obščnost' i problema etnogeneza slavjan' [The Balto-Slavic Language Unity and the Problem of the Ethnogenesis of the Slavs], *Voprosy slavjanskogo jazykoznanija* 3, 5-17.
- Lejeune, M.
1947 *Traité de phonétique grecque* (Paris) (2nd ed., 1955).
- 1952 *Preliminary Reports of the Seventh Linguistic Congress*, London, 1-6.9, 1952 (London), 149-151.
- 1953 "Volltiomnos, Volsomnos, Volsonnos", *Bulletin de la Société de linguistique* 49, 41-55.
- 1955 "Structure de l'anthroponymie vénète d'après les inscriptions d'Este", *Word* 11, 24-44.
- 1956 "La désinence *-qi* en mycénien", *Bulletin de la Société de linguistique* 52, 187-218.
- 1958 *Mémoires de philologie mycénienne* (Paris).
- 1963 "Noms propres de boeufs à Cnossos", *Revue des études grecques* 76, 1-9.
- 1969 "La langue élyme d'après les graffites de Ségeste (V^e siècle)", *Académie des Inscriptions et Belles-Lettres, Comptes rendus* (Paris), 237-246.
- 1970 "Les inscriptions élymiennes", *Revue des études latines* 47, 137-146.
- 1971a *Lepontica* (Paris).
- 1971b *Mémoires de philologie mycénienne*, 2ème série (1958-63) (Rome).
- 1972 *Phonétique historique du mycénien et du grec ancien* (Paris).
- 1974 *Manuel de la langue vénète* (Heidelberg).
- Leroy, M.
1954-55 "Aspects récents de la linguistique indo-européenne", *Phoibos* 8-9, 23-35.
- 1972 *Problèmes du langage*, 2nd ed. (Bruxelles).
- Leskien, A.
1876 *Die Deklination im Slavisch-Litauischen und Germanischen* (Leipzig).
- Leumann, M.
1955 "Baltisch und Slavisch", in *Corolla linguistica F. Sommer* (Wiesbaden), 154-162.
- Leumann, M., and J. B. Hofmann
1928 Stolz-Schmalz, *Lateinische Grammatik*, 5th ed. (München).
- Levi, D.
1953 "Uncovering the Oldest Palace of Phaistos", *Illustrated London News* 12, 12.
- Liddell, H. G., and R. Scott
1953 *A Greek-English Lexicon*, new edition, revised and augmented by H. S. Jones and R. McKenzie (Oxford).
- Lindeman, E. O.
1970 *Einführung in die Laryngaltheorie* (Berlin).
- Lochner-Hüttenbach, F.
1960 *Die Pelasger* (Wien).
- 1970 "Illyrier und Illyrisch", *Das Altertum* 16, 216-221.
- Lohmann, J.
1953 "Gemeinitalisch und Uritalisch (ein Beitrag zur sprachwissenschaftlichen Methodenlehre)", *Lexis* 3, 169-217.
- Lord, A. B.
1960 *The Singer of Tales* (Cambridge, Mass.).
- Lottner, C.
1861 "Über die Stellung der Italer innerhalb des europäischen Sprachstammes", *Zeitschrift für vergleichende Sprachforschung* 7, 18-161.
- Lurja, S.
1957a "Vorgriechische Kulte in den griechischen Inschriften mykenischer Zeit", *Minos* 5, 41-80.
- 1957b *Jazyk i kul'tura mikenskoj Grecii* [The Language and Culture of Mycenaean Greece] (Moscow, Leningrad).
- 1960 Review of W. Merlingen, *Konzept einiger Linear B Indices*, *Gnomon* 32, 200-207.
- Lytkin, V. I.
1953 "Iz istorii slovar'nogo sostava permskix jazykov" [From the History of the Lexics of the Perm Languages], *Voprosy jazykoznanija* 5, 48-69.
- Maccarone, V.
1938 "Contatti lessicali mediterranei", *Archivio glottologico italiano* 30, 120-131.

- Machek, V.
 1939 "Untersuchungen zum Problem des anlautenden *ch-* im Slavischen", *Slavia* 16, 161-219.
 1949 "Origine des thèmes nominaux en *-et-* du slave", *Lingua Posnaniensis* 1, 87-98.
 1950 Review of V. I. Georgiev, *Vorgriechische Sprachwissenschaft*, *Listy filologické* 70, 243-246.
- Malkiel, Y.
 1962 Review of J. Hubschmid, "*Schläuche und Fässer*" and "*Substratprobleme*", *Language* 38, 149-185.
- Malmberg, B. B.
 1966 *Les nouvelles tendances de la linguistique* (Paris).
 1969 "Synchronie et diachronie", *Actes du Xe Congrès International des Linguistes*, Bucarest, 28.8-2.9, 1967, vol. 1, (Bucarest), 13-25.
- Marchand, J. W.
 1955 "Was there ever a Uniform Proto-Indo-European", *Orbis* 4, 428-31.
- Marr, N. J.
 1920 "O jafetičskom proizhoždenii baskskogo jazyka" [On the Japhetic Origin of Basque], *Izvestija Rossijskoj akademii nauk*, vol. 1 (Moscow), fasc. 1-2, 193-199.
 1922 "Du terme basque *udagara* 'louter'", *Jafetičeskij sbornik* 1, 1-90 (Moscow, Leningrad).
 1925a "Analyse nouvelle du terme Pyrénées. Les Pyrénées au Mont Ionien", *Doklady Rossijskoj akademii nauk* 50 (January-March), 5-13, 15-18 (Moscow).
 1925b "Iz poezdki k evropejskim jafetidam [From the Visits of European Japhetids], *Jafetičeskij sbornik*, 3, 1-64 (Moscow, Leningrad).
 1926 "Origine japhétique de la langue basque", *Jazyk i literatura* 1, 193-260 (Moscow).
 1933 *Izbrannye raboty* [Selected Writings], vols. 1-5 (Leningrad).
- Marstrander, C. I. S.
 1929 "Sur la formule d'imprécation phrygienne", *Norsk Tidsskrift for Sprogvidenskap* 2, 290-305.
- Masson, E.
 1972 "Les répertoires graphiques chypro-minoens", *Acta Mycenaea, Proceedings of the Fifth International Colloquium on Mycenaean Studies*, Salamanca, 1970, vol. 1, (Salamanca), 99-111.
- Masson, O.
 1953 "Les inscriptions éteo-chypriotes", *Syria* 30, 83-92.
 1954 "Epigraphie asianique. Bibliographie relative aux inscriptions lyciennes, cariennes, lydiennes et phrygiennes", *Orientalia* 23, 439-442.
 1956 "Les écritures chypro-minoennes et les possibilités de déchiffrement", *Etudes mycéniennes, Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 3-7.4, 1956 (Paris), 199-206.
 1957a "Répertoire des inscriptions chypro-minoennes", *Minos* 5, 9-27.
 1957b "Quelques travaux récents sur le déchiffrement de l'écriture crétoise 'linéaire A'", *Revue de philologie* 31, 85-89.
- Masson, O., and J. Yoyotte
 1956-57 *Objets pharaoniques à inscriptions cariennes* (Cairo).
- Mathews, V. K.
 1958 "O vzaimootnošenii slavjanskix i baltijskix jazykov" [On the Relations between Slavic and Baltic], *Slavjanskaja filologija*, 1, 27-44.
- Matton, R.
 1955 *La Crète antique* (Athens).
- Matz, F.
 1956 *Kreta, Mykenae, Troia* (Stuttgart).
- Mayer, A.
 1952 "Über das Verhältnis des Makedonischen zum Illyrischen", *Glotta* 32, 45-89.
 1957-59 *Die Sprache der alten Illyrier*, vols. 1-2 (Vienna).
- Mayrhofer, M.
 1953-73 *Kurzgefasstes etymologisches Wörterbuch des Altindischen*, vols. 1-2 (Heidelberg).
 1954 Review of J. B. Hofmann, *Etymologisches Wörterbuch des Griechischen*, *Indogermanische Forschungen* 61, 296.
 1959a "Zu den arischen Sprachresten in Vorderasien", *Die Sprache*, 5, 77-95.
 1959b "Über einige arische Wörter mit hurrischem Suffix", *Annali, sezione linguistica*, 1(1,1-11, Naples).
 1960 *Annali, sezione linguistica* 1, 36-39 (Naples).

- 1965a "Hethitisches und arisches Lexikon", *Zeitschrift für vergleichende Sprachforschung* 70, 245-256.
- 1965b "Zur kritischen Sichtung vorderasiatisch-arischen Personennamen", *Indogermanische Forschungen* 70, 146-158.
- 1966 *Die Indo-Arier im Alten Vorderasien* (Wiesbaden).
- 1974 *Die Arier im Vorderen Orient—ein Mythos?* (Vienna).
- McAlpin, D. W.
- 1975 "Elamite and Dravidian: Further Evidence of Relationship", *Current Anthropology*, March 1975, 105-116.
- McDonald, W. A., and R. A. Simpson
- 1961 "Prehistoric Habitation in Southwestern Peloponnesos", *American Journal of Archaeology* 65, 221-232.
- McEvedy, C.
- 1967 *The Penguin Atlas of Ancient History* (Middlesex, Baltimore, Victoria).
- Meid, W.
- 1968 "Indo-European and Celtic", *Scottish Studies, Proceedings of the Third International Congress of Celtic Studies*, Edinburgh, 9-13.9, 1967 (Edinburgh), 12, 1-18.
- Meier, H.
- 1952 *Mirages prélatins. Kritische Betrachtung zur romanischen Substratetymologie* (Frankfurt a/Main).
- Meillet, A.
- 1893 "De quelques difficultés de la théorie des gutturales indo-européennes", *Mémoires de la Société de linguistique* 8, 277-304.
- 1895 "I. La forme de la nasale finale; II. Trois notes des gutturales", *Mémoires de la Société de linguistique* 9, 365-380.
- 1902-05 *Etude sur l'étymologie et le vocabulaire du vieux slave* (Paris).
- 1908-09 "De quelques emprunts probables en grec et en latin", *Mémoires de la Société de linguistique de Paris* 15, 161-164.
- 1922 *Les dialectes indo-européens*, 2nd ed. (Paris).
- 1925a *La méthode comparative en linguistique* (Oslo).
- 1925b "Les origines du vocabulaire slave. I. Le problème de l'unité balto-slave. II. De quelques noms de nombre", *Revue des études slaves* 5, 5-13, 177-182.
- 1926a "Remarques sur l'étymologie de quelques mots grecs", *Bulletin de la Société de linguistique* 26, *Comptes rendus*, 31-42.
- 1926b "Le vocabulaire slave et iranien", *Revue des études slaves* 6, 165-176.
- 1930 *Aperçu d'une histoire de la langue grecque*, 6th ed. (Paris) (1st ed., 1913).
- 1931 *Esquisse d'une histoire de la langue latine*, 2nd ed. (Paris) (1st ed., 1928).
- 1933 "Sur la chronologie de l'indo-européen", in *Actes du 11^e Congrès international de linguistique*, Genève, 25-29.8, 1931 (Paris), 203-206.
- 1936a *Esquisse d'une grammaire de l'arménien classique*, 2nd ed. (Vienne).
- 1936b "Les gutturales et le tokharien", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 2 (Heidelberg), 225-226.
- 1948 *Linguistique historique et linguistique générale* (Paris) (1st ed., 1921).
- 1950 *Les dialectes indo-européens*, 2nd printing (Paris).
- Meillet, A., and E. Benveniste.
- 1937 *Introduction à l'étude comparative des langues indo-européennes*, 8th ed. (Paris).
- Meillet, A., and M. Cohen.
- 1952 *Les langues du monde*, 2nd ed. (Paris).
- Meillet, A., and A. Vaillant
- 1934 *Le slave commun*, 2nd ed. (Paris).
- Meister, R.
- 1911 *Berichte der Sächsischen Gesellschaft der Wissenschaften, phil.-hist. Kl.* (Leipzig), 21-29.
- Melikišvili, G. A.
- 1965 "Voznikovenie xettskogo carstva i problema drevnejšego naselenija Zakavkaz'ja i Maloj Azii" [The Formation of the Hittite Kingdom and the Problem of the Oldest Population in South Caucasus and Asia Minor], *Vestnik drevnej istorii* 1, 3-30.
- Mellaart, J.
- 1958 "The End of the Early Bronze Age in Anatolia and the Aegean", *American Journal of Archaeology* 62, 9-33.
- 1960 "Anatolia and the Balkans", *Antiquity* 34, 136, 270-279.
- Menghin, O.
- 1948 *Migrations Mediterraneae*, *Runa* 1, 111-192.

- Meriggi, P.
 1935 "Die 1. Pers. Sing. im Lydischen", *Revue hittite et asianique* 3, 69-75.
 1936a "Der Indogermanismus des Lykischen", in *Germanen und Indogermanen*, (*Hirt-Festschrift*), vol. 2 (Heidelberg), 257-282.
 1936b "Der indogermanische Charakter des Lydischen", in *Germanen und Indogermanen* (*Hirt-Festschrift*), vol. 2 (Heidelberg), 283-290.
 1951 "Bilancio della prima metà della bilingue eteo-cananea di Karatepe e le iscrizioni di Boybeypinari", *Acme* 4, 2, 179-216.
 1955 "I testi micenei in trascrizione", *Athenaeum* N. S. 33, 1-2, 69-76.
 1956a "Relations entre le minoen B, le minoen A, et le chyprio-minoen", in *Etudes mycéniennes. Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 3-7.4, 1956 (Paris), 193-198.
 1956b *Primi elementi di minoico A* (Salamanca).
 1962a "Über einige hethitische Fragmente historischen Inhaltes", *Wiener Zeitschrift für die Kunde des Morgenlandes* 58, 66-110.
 1962b *Hieroglyphisch-hethitisches Glossar* (Wiesbaden).
 1973 "I nuovi testi ciprominoici", *Minos* 13, 196-258.
 Merlingen, W.
 1953 *Kretische Sprachreste im Griechischen* (Vienna).
 1954 *Bemerkungen zur Sprache von Linear B* (Vienna).
 1955a *Das 'Vorgriechische' und die sprachwissenschaftlichvorhistorischen Grundlagen* (Vienna).
 1955b "Zum Ausgangsgebiet der indogermanischen Sprachen", *Archaeologia Austriaca* 18, 92-104.
 1957 "Idg. 'p' und Verwandtes", in *Gedenkschrift P. Kretschmer*, vol. 2. (Wiesbaden, Vienna); 49-61.
 1959 *Linear B Indices*, vol. 1 (Vienna).
 1962 "Zum 'Vorgriechischen'", *Linguistique Balkanique* 4, 25-55; 5, 2, 5-26.
 Meščaninov, I. I.
 1958 *Grammatičeskij stroj urart'skogo jazyka* [The Grammatical Structure of Urartean] (Leningrad).
 Meyer, E.
 1892 *Forschungen zur alten Geschichte*, vol. 1 (Halle).
 1948 *Die Indogermanenfrage* (Marburg).
 Meyer, G.
 1883-92 "Albanische Studien", in *Sitzungsberichte der Akademie der Wissenschaften*, vols. 104, 107, 125, 1-3 (Vienna).
 1888 *Grundriss der romanischen Philologie*, vol. 1 (Munich).
 1904-06 *Grundriss der romanischen Philologie*, vol. 2 (Munich).
 Mikkollä, J. J.
 1950 *Urslavisches Grammatik*, vol. 3 (Heidelberg).
 Miklosich, F.
 1862 "Die slavischen Elemente im Rumänischen", in *Denkschriften der Wiener Akademie der Wissenschaften, phil.-hist. Kl.* 12 (Vienna).
 Mikov, V.
 1943 *Proizhod i značenie na imenata* [The Origin and Meaning of Names] (Sofia).
 1958 "Kul'tura neolita, eneolita i bronzy v Bolgarii" [The Culture of the Neolithic, Aeneolithic and Bronze Age in Bulgaria], *Sovetskaja arxeologija* 1, 47-55.
 1959 "The Prehistoric Mound of Karanovo", *Archaeology* 12, 2, 88-97.
 1957 "Le problème des lois en linguistique générale", *Lingua Posnaniensis* 6, 120-136.
 Miller, D. G.
 1976 "Pure velars and palatals in Indo-European: a rejoinder to Magnusson", *Linguistics*, 47-64.
 Milford, T. B.
 1952 "The Status of Cypriot Epigraphy: Cypriot Writing, Minoan to Byzantine", *Archaeology* 5, 151-156.
 Mladenov, S.
 1915 "Imenata na deset bălgarski reki" [The Names of Ten Bulgarian Rivers], *Spisanie na Bălgarskata akademija na naukite, Ist.-fil.* 10, 6, 41-70.
 1918 "Imenata na ošte deset bălgarski reki" [The Names of Ten Other Bulgarian Rivers], *Spisanie na Bălgarskata akademija na naukite* 16, 9, 65-104.
 1928 "Albanisch und Thrako-Illyrisch", *Balkan-Archiv* 4, 181-194.

- 1936 *Sravnitel'no i indoevropsko ezikoznanie* [Comparative IE Linguistics] (Sofia).
 1941 *Etimologičeski i pravopisen rečnik na bŭlgarskija ezik* [An Etymological and Orthographical Dictionary of Bulgarian] (Sofia).
 1943 *Uvod vo vseobštoto ezikoznanie* (An Introduction to General Linguistics) (Sofia).
 Moora, H. A.
 1958 *Sovetskaja arxeologija*, vol. 2 (Moscow).
 Morgenstierne, G.
 1929 "The Language of the Ashkun Kafirs", *Norsk Tidsskrift for Sprogvidenskap* 2, 192-189 (Oslo).
 1975 *Irano-Dardica* (Wiesbaden).
 Mühlestein, H.
 1956a *Die oka-Tafeln von Pylos: Ein mykenischer Schiffskatalog?* (Basel).
 1956b "L'adjectif mycénien signifiant 'en or'", in *Etudes Mycéniennes, Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 3-7.4, 1956 (Paris) 93-97.
 Mukarovsky, H. G.
 1963-64 "Baskisch und Berberisch", *Wiener Zeitschrift für die Kunde des Morgenlandes* 59-60, 52-60.
 1965 "Euro-Saharisch, eine alte Spracheinheit Europas und Afrikas", *Mitteilungen der Anthropologischen Gesellschaft in Wien* 95, 66-72.
 1966 "Über den Grundwortschatz des Euro-Saharischen", *Mitteilungen zur Kulturkunde* 1, 135-143.
 1968 "Les rapports du basque et du berbère", *GLECS* 10, 177-184.
 1969 "Baskisch-berberische Entsprechungen", *Wiener Zeitschrift zur Kunde des Morgenlandes* 62, 32-43.
 Nagy, P.
 1963 "Greek-Like Elements in Linear A", *Greek, Roman and Byzantine Studies* 4, 181-189.
 Needly, Z.
 1952 *Istoriya čexskogo naroda* [The History of the Czech People], vol. 1 (Moscow).
 Nehring, A.
 1936 *Die Indogermanen- und Germanenfrage. Neue Wege zu ihrer Lösung* (Salzburg, Leipzig).
 1954 *Die Problematik der Indogermanenfrage* (Würzburg).
 1968 "Die Problematik der Indogermanenforschung", *Die Urheimat der Indogermanen*, ed. by A. Scherer (Darmstadt), 388-398.
 Neumann, G.
 1961 *Untersuchungen zum Weiterleben hethitischen und luwischen Sprachgutes in hellenischer und römischer Zeit* (Wiesbaden).
 1962 "Beiträge zum Lykischen II", *Die Sprache* 8, 203-212.
 1967 *Indogermanische Sprachwissenschaft 1816 und 1966* (Innsbruck).
 1969 "Lykisch", *Handbuch der Orientalistik*, vol. 1, 2, 1-2, 2, *Altkleinasiatische Sprachen* (Leiden, Köln).
 Ognenova, L.
 1958 "'Iliriskijat' nadpis ot Severna Albanija" [The 'Illyrian' Inscription from Northern Albanija], *Studia in honorem D. Dečev* (Sofia), 333-341.
 Ölberg, H.
 1968 "Idg. k' vor und im Albanischen", *Studien zu Sprachwissenschaft und Kulturkunde* (Innsbruck), 110-118.
 Olzscha, K.
 1936 "Die Sprache der Etrusker", *Neue Jahrbücher* 12, 97-116.
 Osthoff, H.
 1890 "Ablautend idg. sr- in Lateinischen", *Morphologische Untersuchungen* 5, 69-84.
 1895 "Labiovelare Media und Media aspirata in Keltischen", *Indogermanische Forschungen* 4, 264-294.
 Osthoff, H., and K. Brugmann
 1878-1910 *Morphologische Untersuchungen auf dem Gebiete der indogermanischen Sprachen*, vols. 1-6 (Leipzig).
 Otrembski, J. S.
 1954 "Slavjano-baltijskoe jazykovoe edinstvo" [The Slavic-Baltic Language Unity], *Voprosy jazykoznanija* 5, 27-42; 6, 28-46.
 Otten, H.
 1944 "Zum Palaischen", *Zeitschrift für Assyriologie, NF* 14 (48), 119-145 (Berlin).
 1945 "Palaisches", *Archiv für Orientforschung* 15, 81-89.
 1946 "Beiträge zum Palaischen", *Wissenschaftliche Annalen* 2, 327-336.

- 1954 "Zur grammatikalischen und lexikalischen Bestimmung des Luvischen unter den anatolischen Sprache", *Orientalische Literaturzeitung* 49, 293-307.
- 1964 "Der Weg des hethitischen Staates zum Grossreich", *Saeculum* 15, 115-124.
- Page, D. L.
- 1959 *History and Homeric Iliad* (Berkeley, Los Angeles).
- Pallottino, M.
- 1947 *L'origine degli Etruschi* (Rome).
- 1968a *Etruscologia*, 6th ed. (Milan).
- 1968b *Testimonia linguae Etruscae*, 2nd ed. (Florence) (=TLE).
- 1969 "L'ermeneutica etrusca tra due documenti chiave", *Studi Etruschi* 37, 79-86.
- Palmer, L. R.
- 1954 *The Latin Language* (London).
- 1955a *Achaeans and Indo-Europeans* (Oxford).
- 1955b *Bulletin of the Institute of Classical Studies* 2, 36-39 (London).
- 1958 "Luwian and Linear A", *Transactions of the Philological Society*, 75-110 (Oxford).
- 1965 *Mycenaeans and Minoans*, 2nd ed. (London).
- 1968 "Linear A and the Anatolian Languages", in *Congresso di Micenologia*, Rome, 2, 9-3.10, 1967, vol. 1 (Rome), 339-352.
- 1969 *The Penultimate Patace of Knossos* (Rome).
- Palmer, L. R., and J. Boardman
- 1966 *On the Knossos Tablets. The Find-Places of the Knossos Tablets. The Date of the Knossos Tablets* (London).
- Papapostolu, I. A., L. Godart and J. P. Oliver
- 1976 *Grammiké A sto Minōico archeio tōn Chaniōn* (Rome).
- Pape, W., and G. Benseler
- 1911 *Wörterbuch der Griechischen Eigennamen*, 3rd ed., vols. 1-2 (Braunschweig).
- Paret, O.
- 1948 *Das neue Bild der Vorgeschichte* (Stuttgart).
- Parlangeli, O.
- 1960 *Studi messapici* (Milan).
- Pärvan, V.
- 1926 "Zur Rekonstruktion des Urrumänischen", *Beiheft 26 zur Zeitschrift für romanische Philologie* 26, 61-64 (Halle).
- Pedersen, H.
- 1900 "Die Gutturale im Albanesischen", *Zeitschrift für vergleichende Sprachforschung* 36, 277-285, 292-294.
- 1902 "Zur armenischen Sprachgeschichte", *Zeitschrift für vergleichende Sprachforschung* 38, 194-240.
- 1906 "Armenisch und die Nachbarsprachen", *Zeitschrift für vergleichende Sprachforschung* 39, 334-484.
- 1907-08 "Nachträge zu IE, 22", *Indogermanische Forschungen* 22, 340-341.
- 1909-13 *Vergleichende Grammatik der keltischen Sprachen*, vols. 1-2 (Göttingen).
- 1924 "Armenier", in *Reallexikon der Vorgeschichte*, ed. by M. Ebert, vol. 1 (Berlin), 319-324.
- 1925 *Le groupement des dialectes indo-européens* (Copenhagen).
- 1938 *Hittitisch und die anderen indoeuropäischen Sprachen* (Copenhagen).
- 1941 *Tocharisch vom Gesichtspunkt der indoeuropäischen Sprachvergleichung* (Copenhagen).
- 1943 "Et Baltoslavisk problem", in *In memoriam Kr. Sandfeld* (Copenhagen), 184-194.
- 1945 *Lykisch und Hittitisch* (Copenhagen).
- Pellegrini, G. B.
- 1955 *Le iscrizioni venetiche* (Pisa).
- Pellegrini, G. B., and A. L. Prosdocimi
- 1967 *La lingua venetica*, vols. 1-2 (Padova).
- Persson, A.
- 1922 "Inscriptions de Carie", *Bulletin de correspondance hellénique* 46, 394-426.
- Peruzzi, E.
- 1957 "L'iscrizione HT 13", *Minos* 5, 35-40.
- 1959a "Il minoico è indoeuropeo?", *La parola del passato* 65, 106-112.
- 1959b "Recent Interpretations of Minoan (Linear A)", *Word* 15, 313-320.
- 1960a *Le iscrizioni minoiche* (Florence).
- 1960b "Struktura i jazyk minojiskix nadpisej" [Structure and Language in the Minoan Inscriptions], *Voprosy jazykoznanija* 3, 17-27.
- Petruševski, M. D.
- 1962 "Wo-no-qo-so", *Živa Antika* 11, 250.

- Philippide, A.
 1928 *Origine Romînilor*, vol. 2 (Iași).
 Picard, C.
 1944 "Un groupe archaïque étrusque: Enée portant Anchise", *Revue d'archéologie* 21, 154-156.
 PID *The Prae-Italic Dialects of Italy* (Whatmough) 1933.
 Pisani, V.
 1933 *Studi sulla preistoria delle lingue indoeuropee* (= *Reale Accademia Nazionale dei Lincei*), ser. VI, vol. IV, fasc. VI (Rome).
 1935 "Slavo e iranico", in *Atti del III Congresso internazionale dei linguisti*, Rome, 19-26.9, 1933 (Florence), 371-379.
 1937 "La posizione linguistica del macedone", *Revue internationale des études balkaniques* 1, 5, 8-16.
 1940 *Geolinguistica e indoeuropeo* (= *Reale Accademia Nazionale dei Lincei*, ser. VI, vol. IX, fasc. II) (Rome).
 1941-42 "Glottica parerga. I Appunti di tocarico", *Rendiconti dell'Istituto Lombardo di scienze e lettere* 75, 2, 2-13 (Milan).
 1947 *Linguistica generale e indoeuropea* (Milan).
 1949a "La question de l'indo-hittite et le concept de parenté linguistique", *Archiv Orientalní* 17, 2, 251-264.
 1949b *Glottologia indoeuropea* (*Grammatica comparata delle lingue indoeuropee con speciale riguardo del greco et del latino*), 2nd ed. (Turin).
 1953 *Allgemeine und vergleichende Sprachwissenschaft, Indo-Germanistik* (Bern).
 1954 "Sostrati anari e indoeuropeo occidentale", *Paideia* 9, 1-17.
 1955 "Die Entzifferung der ägäischen Linear B Schrift und die griechischen Dialekte", *Rheinisches Museum für Philologie* 98, 1-8.
 1956 *Obščee i indoeuropejskoe jazykoznanie* [General and IE Linguistics] (Moscow).
 1957 "Thrakisches", *Zeitschrift für vergleichende Sprachforschung* 75, 76-79.
 1959a "Obiter scripta (Ancora sulla provenienza dei dialetti greci)", *Paideia* 14, 178-186.
 1959b *Saggi di linguistica storica* (Turin).
 1961 "La ricostruzione dell' indoeuropeo e del suo sistema fonetico", *Archivio Glottologico Italiano* 46, 1-31 (Florence).
 1964 *Le lingue dell'Italia antica oltre il latino*, 2nd ed. (Turin).
 Platon, N.
 1958 "Inscribed Libation Vessel from a Minoan House at Prassà", in *Minoica (Festschrift J. Sundwall)*, (Berlin), 305-318.
 Poghirc, C.
 1960 "Considérations sur le lexique de l'ancien macédonien", *Revue de linguistique* 5, 135-145.
 1968 "Problèmes actuels de l'étymologie roumaine", *Revue roumaine de linguistique* 13, 208-219.
 1969 "Influența autohtonă" [Autochthonous Influence], in *Istoria limbii române*, vol. 2 (Bucharest), 313-365.
 1971 "Reflexion sur les problèmes du daco-moesien", in *L'ethnogenèse des peuples balkaniques* (Sofia), 171-177.
 Pokorny, J.
 1923 "Die Stellung des Tocharischen im Kreise der indogermanischen Sprachen", *Berichte des Forschungsinstitutes für Osten und Orient* 3, 24-53 (Vienna).
 1925 *Zeitschrift für celtische Philologie* 10, 521-530.
 1936 "Zur Urgeschichte der Kelten und Illyrier", *Zeitschrift für celtische Philologie* 20, 315-352, 489-522.
 1951-69 *Indogermanisches etymologisches Wörterbuch*, vols. 1-2 (Bern).
 Pollo, S., A. Buda, K. Frasheri and S. Islami
 1959 *Historia e Shqipërisë*, vol. 1 (Tirana).
 Polomé, E.
 1952 "Zum heutigen Stand der Laryngeal-Theorie", *Revue Belge de philologie et d'histoire* 30, 444-480.
 1957 *Gedenkschrift-Kreischner*, vol. 2 (Göttingen), 86-91.
 1961 "Les langues indo-européennes dans le milieu méditerranéen", *Latomus* 20, 806-812.
 1963 *The Laryngeal Theory So Far* (Austin, Texas).
 1966 "The Position of Illyrian and Venetic", in *Ancient IE Dialects*, ed. by H. Birnbaum and J. Puhvel (Berkeley, Los Angeles), 59-76.

- Pope, M.
1964 *Aegean Writing and Linear A* (Lund).
- Popov, A. I.
1956 "Sokraščennoe izloženie vystuplenij" [Summaries], in *Institut jazykoznanija, Doklady i soobščeniya*, vol. 9 (Moscow), 149-150.
- 1957 "Toponimika kak istoričeskaja nauka" [Toponymy as Historical Science], *Movoznavstvo* 14, 3-9.
- Popović, I.
1958 "Slaven und Albaner in Albanien und Montenegro", *Zeitschrift für slavische Philologie* 26, 301-312.
- 1959a "Der albanische Ortsname Vlore 'Vallona'", *Beiträge zur Namenforschung* 10, 243-246.
- 1959b "Illyro-Slavica", *Annali, sezione linguistica* 1, 165-176.
- 1960a *Geschichte der serbokroatischen Sprache* (Wiesbaden).
- 1960b *Zeitschrift für Slavistik* 4, 714-719.
- Porzezinskij, V.
1914 *Sravnitel'naja grammatika slavjanskix jazykov* [A Comparative Grammar of the Slavic Languages], (Moscow).
- Porzig, W.
1954a *Die Gliederung des indogermanischen Sprachgebiets* (Heidelberg).
- 1954b "Sprachgeographische Untersuchungen zu den altgriechischen Dialekten", *Indogermanische Forschungen* 61, 147-158.
- 1960 "Altitalische Sprachgeographie", in *Indogermanica (Festschrift für W. Krause)* (Heidelberg), 173-182.
- Poucha, P.
1955 *Institutiones linguae Tocharicae*, vol. 1 (Prague).
- Pugliese Carratelli, G.
1945 "Le iscrizioni preelleniche di Haghia Triada in Creta e della Grecia peninsulare", *Monumenti antichi pubblicati per cura delle Reale Accademia d'Italia* 40, 4, 2, 421-610 (Milan).
- 1952-54 "La decifrazione dei testi micenei ed il problema della lineare A", *Annuario della Scuola archeologica di Atene* 30-32, n. s., 14-16, 11-21 (Rome).
- 1957-58 "Nouve epigrafi minoiche di Festo", *Annuario della Scuola archeologica di Atene* N. 9, 19-20, 363-374.
- Puhvel, J.
1966 "Dialectal Aspects of the Anatolian Branch of IE", in *Ancient IE Dialects*, ed. by H. Birnbaum and J. Puhvel (Berkeley, Los Angeles), 235-247.
- Pulgram, E.
1947 "Indo-European Personal Names", *Language* 23, 189-206.
- 1959 "Proto-Indo-European Reality and Reconstruction", *Language* 35, 421-26.
- 1960 "New Evidence on Indo-European Names", *Language* 36, 198-262.
- Rachet, G.
1970 *Archéologie de la Grèce préhistorique* (Paris).
- Rainer, E.
1969 "The Elamite Language", in *Handbuch der Orientalistik*, vol. 1, 2, 1-2, 2, *Altkleinasiatische Sprachen* (Leiden, Köln) 54-118.
- Raison, J., and M. Pope
1971 *Index du linéaire A* (Rome).
- Rask, N.
1818 *Undersøgelse om det gamle Nordiske eller Islandske Oprindelse* [Investigations on the Origin of Old Norse or Icelandic Languages] (Copenhagen).
- Reche, O.
1936 "Entstehung der Nordischen Rasse und Indogermanenfrage", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 1 (Heidelberg), 287-316.
- Reichelt, H.
1909 *Awestisches Elementarbuch* (Heidelberg).
- Renfrew, C.
1969 "The Autonomy of the South-East European Copper Age", in *Proceedings of the Prehistoric Society* 35, 11-21.
- Renou, L.
1956 *Histoire de la langue sanskrite* (Paris).
- Ribezzo, F.
1903 "Il problema capitale delle guturali ie.", *Rendiconti dell 'Accademia di Napoli* 17.

- 1922-23 "Per la genesi delle 3 serie gutturali indoeuropee", *Rivista indo-greco-italica* 6, 225-241; 7, 41-62.
- 1929 "Piccolo testo etrusco inedito con probabile accenno al culto campano-etrusco di Ulisse o *Návros*", *Rivista indo-greco-italica* 13, 148-160.
- 1933 "A proposito della Memoria di Vittore Pisani, Studi sulla preistoria delle lingue indoeuropee", *Rivista indo-greco-italica* 17, 111-118.
- 1934a "Note e aggiunte ai tre volumi di Conway, Whatmough, Johnson, *The Praeitalic Dialects of Italy*", *Rivista indo-greco-italica* 18, 103-114.
- 1934b "Sostrato mediterraneo e Lautverschiebung germanica", *Rivista indo-greco-italica* 18, 61-101.
- 1940 "Premesse storico-linguistiche sull'autoctonia illirica degli Albanesi", *Rivista d'Albania* 1, 114-141.
- 1941 "L'originaria area etno-linguistica dell'albanese e la sopravvivenza di una parola peonica in Italia", *Rivista d'Albania*, 2, 129-147.
- Risch, E.
- 1955 "Die Gliederung der griechischen Dialekte in neuer Sicht", *Museum Helveticum* 12, 61-72.
- 1956 "La position du dialecte mycénien", in *Etudes Mycéniennes, Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 3-7.4, 1956, (Paris), 167-172.
- 1966 "Les différences dialectales dans le mycénien", in *Mycenaean Studies, Proceedings of the Cambridge Colloquium on Mycenaean Studies*, Cambridge, 7-12.4, 1965, ed. by L. R. Palmer and J. Chadwick (Cambridge), 150-191.
- 1968 "Conclusions", in *Studia Mycenaea, The Mycenaean Symposium*, Brno, 10—15.4, 1966 (Brno), 207—210.
- 1970 "Die Räter als sprachliches Problem", *Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte* 55, 130—139.
- Rohlf, G.
- 1960 "Europäische Flussnamen und ihre historischen Probleme", *Studia Onomastica Monacensia* 2, 1-22.
- Rosenkranz, B.
- 1950 Review of V. I. Georgiev, "Vorgriechische Sprachwissenschaft", *Indogermanische Forschungen* 59, 336-337.
- 1952a *Beiträge zur Erforschung des Luvischen* (Wiesbaden).
- 1952b "Der gegenwärtige Stand der Erforschung der luvischen Sprache", *Bibliotheca Orientalis* 9, 159-168.
- 1955 "Die 'Glossenkeil-Sprache' von Bogazköy", *Zeitschrift für Assyriologie* NF, 17, 252-254.
- 1956 "Zum Luvischen", *Die Welt des Orients*, 285-289.
- 1959 *Bibliotheca Orientalis* 16, 15-17. No. 1-2.
- Rosetti, A.
- 1958 "K voprosu o balkanskom jazykovom sojuze" [On the Question of the Balkan Language Union], *Revue de linguistique*, 3, 135-139.
- 1962 *Istoria limbii române*, vols. 1-4 (Bucharest).
- Rospond, S.
- 1966 "Prasłowiane w świetle onomastyki" [The Protoslavs in the Light of Onomastics], *I. Międzynarodowy kongres archeologii słowiańskiej*, Warsaw, 9—14.4, 1965 (Warsaw), 162-169.
- Rozwadowski, J.
- 1948 *Studia nad nazwami wód słowiańskich* [Studies on Slavic River Names] (Kraków).
- Ruijgh, C. J.
- 1958 "Les datifs pluriels dans les dialectes grecs et la position du mycénien", *Mnemosyne* 2, 97-106.
- 1967 *Études sur la grammaire et le vocabulaire du grec mycénien* (Amsterdam).
- Ruipérez, M. S.
- 1952 "Desinencias medias primarias indoeuropeas", *Emerita* 20, 8-31.
- 1955 "Les études sur le linéaire B depuis le déchiffrement de Ventris", *Minos* 3, 157-167.
- 1956 "*Ko-re-te-re* et *po-ro-ko-re-te-re* à Pylos", in *Etudes mycéniennes, Actes du Colloque international sur les textes mycéniens*, Gif-sur-Yvette, 2-7.4, 1956 (Paris), 105-120.
- Russu, I. I.
- 1938 "Macedonica", *Ephemeris Dacoromana* 8, 105-232.
- 1957a "Studii illirice", *Studii și cercetări lingvistice* 8, 1, 27-42.
- 1957b "La disparition de la langue et des populations thraces et daces", *Studii și cercetări de istorie veche* 8, 253-266.

- 1961 "Illyrische Studien. III. Teil. Die sprachliche Stellung der Illyrier", *Revue de linguistique* 6, 63-84.
- 1967 *Limba traco-dacilor* [The Language of the Thraco-Dacians] (Bucharest).
- 1969 *Illirii* (Bucharest).
- 1970 *Elemente autohtone in limba română. Substratul comun romano-albanez* [Autochthonous Elements in Rumanian. The Common Rumanian-Albanian Substrate] (Bucharest).
- Rysiewicz, Z.
- 1956 *Studia językoznawcze* (Wrocław).
- Sacconi, Anna
- 1974 *Corpus delle iscrizioni in leneare B die Micene* (Rome).
- Safarewicz, J.
- 1945 "Pochodzenie trzech szeregów spółgłosek tylnojęzykowych w prajęzyku indoeuropejskim" [The Origin of the Three Series Gutturals in the IE Languages], *Sprawozdania Polskiej Akad. Umiejętności* 46, 37-49.
- 1975 "Note sur la prétendue communauté linguistique italique", *Revue roumaine de linguistique*, 20, 463-6.
- Sakellariou, M.
- 1965 "Les Ioniens", *Atti del VI Congresso internazionale delle scienze preistoriche e protostoriche*, Rome, 6-11. 5, 1964 (Rome), 101-109.
- 1977 *Peuples préhelléniques d'origine indo-européenne* (Athens).
- Sauvageot, A.
- 1958 "A propos de certains noms de lieux en Russie septentrionale", *Ural-Altaische Jahrbücher* 30, 1-2, 1-7,
- Schachermeyr, F.
- 1929 *Etruskische Frühgeschichte* (Berlin).
- 1936 "Wanderungen und Ausbreitung der Indogermanen im Mittelmeergebiet", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 1 (Heidelberg), 229-253.
- 1954 "Prähistorische Kulturen Griechenlands", in *Realencyclopädie der Altertumswissenschaft*, vol. 22, 2 (Stuttgart), 1350-1438.
- 1955 *Die ältesten Kulturen Griechenlands* (Stuttgart).
- Scherer, A.
- 1950 "Das Problem der indogermanischen Urheimat vom Standpunkt der Sprachwissenschaft", *Archiv für Kulturgeschichte* 33, 1-16.
- 1956 "Hauptprobleme der indogermanischen Altertumskunde (seit 1940)", *Kratylos* 13-21.
- 1972 "L'indoeuropeizzazione dell'Europa e la formazione delle famiglie linguistiche indoeuropee", in *Le lingue dell'Europa* (Atti del V convegno internazionale di linguisti, 1-5.9, 1969), 21-36.
- Scherer, A., ed.
- 1968 *Die Urheimat der Indogermanen* (Darmstadt).
- Scherer, P.
- 1900 *Germanic-Balto-Slavic Etyma* (=Language Dissertations No 32, Supplement to Language; Yale).
- Schindler, J.
- 1967 "Das indogermanische Wort für Erde und die dentalen Spiranten", *Die Sprache* 13, 91-93.
- 1968 "Tocharische Miscellen", *Indogermanische Forschungen* 72, 239-249.
- Schleicher, A.
- 1852 "Germanisch und Slavisch", *Zeitschrift für vergleichende Sprachforschung* 1, 141-144.
- 1858 "Kurzer Abriss der Geschichte der slavischen Sprache", *Beiträge zur vergleichenden Sprachforschung* 1, 1-27.
- 1861-62 *Compendium der vergleichenden Grammatik der indogermanischen Sprachen* (Weimar) (2d. ed., 1866).
- Schmid, W. P.
- 1968 *Alteuropäisch und Indogermanisch* (=Akademie der Wissenschaften und der Literatur (Mainz), Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse, Nr. 6) (Wiesbaden).
- Schmidt, J.
- 1872 *Die Verwandtschaftsverhältnisse der idg. Sprachen* (Weimar).
- 1881 "Zwei arische a Laute und die Palatalen", *Zeitschrift für vergleichende Sprachforschung* 25, 1-179.

- Schmidt, K. H.
 1969 "Die Stellung des Keltischen innerhalb der idg. Sprachfamilie, historisch-vergleichend und typologisch gesehen", *Zeitschrift für vergleichende Sprachforschung* 83, 108-119.
 1971 "Zum Keltischen", *Zeitschrift der Deutschen morgenländischen Gesellschaft* 199, 333-343.
 1972 "Problemy genetičeskoj i tipologičeskoj rekonstrukcii kavkazskix jazykov" [Problems in the Genetic and Typological Reconstruction of the Caucasian Languages], *Voprosy jazykoznanija* 4, 14-25.
- Schmökel, H. H.
 1938 *Die ersten Arier im Alten Orient* (Leipzig).
 1957 *Geschichte des alten Vorderasien* (Leiden).
- Schmoll, U.
 1958 *Die vorgriechischen Sprachen Siziliens* (Wiesbaden).
 1959 *Die Sprachen der vorkeltischen Indogermanen Hispaniens und das Keltiberische* (Wiesbaden).
- Schrader, O.
 1907 *Sprachvergleichung und Urgeschichte*, 3rd ed., vols. 1-2 (Jena).
 Schrader, O., and H. Krahe
 1935 *Die Indogermanen* (Leipzig).
- Schrader, O., and A. Nehring.
 1917-29 *Reallexikon der indogermanischen Altertumskunde*, 2nd ed., vols. 1-2 (Berlin).
- Schrijnen, J.
 1921 *Einführung in das Studium der indogermanischen Sprachwissenschaft* (Heidelberg).
 1936 "Les rapports préhistoriques du grec et du latin", *Bulletin de la Société de linguistique* 37, 125-140.
- Schuchardt, C.
 1941 *Alteuropa* (Berlin).
- Schuchardt, H.
 1906 "Baskisch und Romanisch", *Beihefte zur Zeitschrift für romanische Philologie* 6, 1-62 (Halle).
- Schulten, A.
 1940 "Die Tyrsener in Spanien", *Klio* 33, 73-102.
- Schulz, W.
 1935 "Die Indogermanenfrage in der Vorgeschichtsforschung: Völkerbewegungen während der jüngeren Steinzeit (3. Jahrtausend v. Chr.)", *Zeitschrift für vergleichende Sprachforschung* 62, 184-198.
- Schwarz, E.
 1950 *Deutsche Namenforschung*, vol. 2 (Göttingen).
- Schwentner, E.
 1935 "Tocharisch", in *Grundriss der idg. Sprach- und Altertumskunde*, 2: *Die Erforschung der idg. Sprachen*, vol. 5, 2 (Berlin, Leipzig), 21-27.
 1942 "Toch. A kätš 'Bauch'", *Zeitschrift für vergleichende Sprachforschung* 67, 228.
 1943 "Zur Stellung des Tocharischen im Kreise der übrigen idg. Sprachen", *Zeitschrift für vergleichende Sprachforschung* 68, 33-35.
- Schwyzer, E.
 1934-39 *Griechische Grammatik* (München).
- SE=Studi Etruschi.
- Seeger, H.
 1936 "Vorgeschichtsforschung und Indogermanenproblem", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 1 (Heidelberg), 1-40.
- Senn, A.
 1953 "Die Beziehungen des Baltischen zum Slavischen und Germanischen", *Zeitschrift für vergleichende Sprachforschung* 71, 162-88.
 1966 "The Relationships of Baltic and Slavic", in *Ancient IE Dialects*, ed. by H. Birnbaum and J. Puhvel (Berkeley, Los Angeles), 139-151.
- Serebrennikov, V. A.
 1955 "Volgo-Okskaja toponimika na territorii evropejskoj časti SSSR" [The Toponymy of the Volga and Oka Region in the European Territory of the USSR], *Voprosy jazykoznanija* 6, 19-31.
 1956 "Problema substrata" [The Substrate Problem], in *Institut jazykoznanija, doklady i soobščeniya* 9, 33-56.

- Sevoroškin, V. V.
 1962 "Karijskij vopros" [The Carian Question], *Voprosy jazykoznanija* 5, 93-100.
 1964a "On Karian", *Revue hittite et asianique* 22, 74, 1-55.
 1964b "Zur karischen Schrift und Sprache", *Kadmos* 3, 72-87.
 1965 *Issledovanija po dešifrovke karijskix nadpisej* [Research on the Decipherment of the Carian Inscriptions] (Moscow).
 1968 "Karisch, Lydisch und Lykisch", *Klio* 50, 53-59.
 Shafer, J.
 1950 "Pisidian", *American Journal of Philology* 71, 239-270.
 Šiadbei, I.
 1957 "Sur l'élément latin de l'albanais", *Mélanges linguistiques* (Bucarest), 63-69.
 Sieg, E. H., W. Siegling, and W. Schulze
 1931 *Tocharische Grammatik* (Göttingen).
 Singha, N. K., and A. K. Banerji
 1954 *Istoriia Indii* [A History of India] (Moscow).
 Sittig, E.
 1954 "Hellenische Urkunde des 2. vorchr. Jahrtausends von Kypros", *La nouvelle Clio* 6, 470-478.
 1956a Review of V. I. Georgiev, "Problemy minojского jazyka", *Deutsche Literaturzeitung* 77, 4, 245-250.
 1956b "Zur Entzifferung der minoisch-kyprischen Tafel von Enkomi", *Minos* 4, 33-42.
 Skok, P.
 1928 "Ortsnamenstudien", *Zeitschrift für Ortsnamenforschung* 4, 213-244 (Munich, Berlin).
 Sköld, H.
 1926 "Die sprachliche Stellung der Kafir-Sprachen", in *Wissenschaftliche Berichte über den Deutschen Orientalistentag* (Hamburg).
 Stawski, F.
 1953-80 *Słownik etymologiczny języka polskiego* [An Etymological Dictionary of the Polish Language] (Kraków).
 1956 "Vzaimootnošenija meždu juznoslavjanskite ezici" [The Interrelationships between the South-Slavic Languages], *Balgarski ezik* 6, 97-105.
 Šmilauer, V.
 1962 *Zpravodaj Mistopisné Komise ČSAV* 3, 346-348 (Prague).
 Snyder, W. H.
 1967 "Zum Zeugnis der Flussnamen für die Vor- und Frühgeschichte", *Beiträge zur Namenforschung* NF, 2, 146-164.
 Solmsen, F., and E. Fraenkel
 1922 *Indogermanische Eigennamen als Spiegel der Kulturgeschichte* (Heidelberg).
 Solta, G.
 1965 "Palatalisierung und Labialisierung", *Indogermanische Forschungen* 70, 276-315.
 Sommer, F.
 1924 "Zur venetischen Schrift und Sprache", *Indogermanische Forschungen* 42, 90-132.
 1932 *Die Ahhijava-Urkunden* (Munich).
 1947 *Hethiter und Hethitisch* (Stuttgart).
 1954 "Hethitische Verbalsubstantiva auf -at(t)-=ai. -āt- und Denominalia auf -ant/d- =gr. -ad-", *Münchener Studien zur Sprachwissenschaft* 4, 1-8.
 Sommerfelt, A.
 1944 *Transactions of the Philological Society* (1942), 2-26.
 1945 "Les questions linguistiques et la paix", *Word*, 1, 5-18 (New-York).
 1958 "Some Remarks on the Problems of the Original Indo-European Habitat", *Norsk Tidsskrift for Sprogvidenskap* 18, 137-142.
 Specht, F.
 1934 "Zur Geschichte der Verbalklasse auf -ē. Ein Deutungsversuch der Verwandtschaftsverhältnisse des Indogermanischen", *Zeitschrift für vergleichende Sprachforschung* 62, 29-115.
 1947 *Der Ursprung der indogermanischen Deklination*, 2d ed. (Göttingen), (1st ed., 1944).
 1948 "Die 'indogermanische' Sprachwissenschaft von den Junggrammatikern bis zum ersten Weltkrieg", *Lexis* 1, 229-263.
 Spyropoulos, Th. G., and J. Chadwick
 1975 *The Thebes Tablets II* (Salamanca).
 Sprockhoff, E.
 1936 "Zur Entstehung der Germanen", in *Germanen und Indogermanen (Hirt-Festschrift)*, vol. 1 (Heidelberg), 255-274.

- Stang, C. S.
 1966 *Vergleichende Grammatik der baltischen Sprachen* (Oslo, Bergen, and Tromsö).
 1971 *Lexikalische Sonderübereinstimmungen zwischen dem Slavischen, Baltischen und Germanischen* (Oslo, Bergen, and Tromsö).
 Stadtmüller, G.
 1941 *Forschungen zur albanischen Frühgeschichte* (Vienna).
 Steinhauser, W.
 1938 "Flussnamen und Volkstum in der deutschen Ostmark", in *Actes et mémoires du Ier Congrès international de toponymie et d'anthroponymie*, Paris, 4-9.5, 1937 (Paris), 181-189.
 Strazdin, K. I., ed.
 1955 *Istoriija Latvijskoy SSSR* [The History of Latvia] (Riga).
 Strunk, K.
 1961 "Sprachliches und Prosodisches zur mykenischen Orthographie", *Indogermanische Forschungen* 66, 155-170.
 1965 "Probleme der idg. Sprachwissenschaft nach Brugmann", *Glotta* 43, 199-217.
 Struve, V. V.
 1947 "Desifrovka protoindijski x pis'men" (The Decipherment of the Proto-Indian Scripts) *Vestnik Akademii nauk SSSR* 8, 51-58.
 Sturtevant, E. H.
 1933 *A Comparative Grammar of the Hittite Language* (Philadelphia).
 Sturtevant, E. H., and A. Hahn
 1951 *A Comparative Grammar of the Hittite Language* (Philadelphia).
 Sundwall, J.
 1950 *Kleinasiatische Nachträge* (Helsinki).
 1954 Review of A. J. Van Windekens, *Contribution à l'étude de l'onomastique pélasgique*, *Neuphilologische Mitteilungen* 55, 310-311 (Helsinki).
Studi Etruschi, a journal on Etruscology published in Florence (1926—).
 Szemerényi, O.
 1955 "Hittite Pronominal Inflection and the Development of Syllabic Liquids and Nasals", *Zeitschrift für vergleichende Sprachforschung* 73, 57-80.
 1957 "The Problem of Balto-Slavic Unity", *Kratylos* 2, 97-123.
 1962 *Trends and Tasks in Comparative Philology* (London).
 1963 "On Reconstructing the Mediterranean Substrata", *Romance Philology* 17, 404-418.
 1967 "The New Look of Indo-European Reconstruction and Typology", *Phonetica* 17, 65-99.
 1968 "Methodology of Genetic Linguistics", in *Methoden der Sprachwissenschaft* (Munich), 3-38.
 1970 *Einführung in die vergleichende Sprachwissenschaft* (Darmstadt).
 1971 *Richtungen der modernen Sprachwissenschaft. I. Von Saussure bis Bloomfield, 1916-1950* (Heidelberg).
 1972 "Comparative Linguistics", in *Current Trends in Linguistics*, vol. 9 (The Hague), 119-195.
 Thieme, P.
 1954 *Die Heimat der indogermanischen Gemeinsprache* (Wiesbaden).
 Thumb, A.
 1905-06 "Psychologische Studien über die sprachlichen Analogiebildungen", *Indogermanische Forschungen, Anzeiger* 18, 1-55.
 Thumb, A., and R. Hauschild
 1958 *Handbuch des Sanskrit*, 3rd ed., vol. 1 (Heidelberg).
 Thumb, A., and H. Hirt
 1934 *Handbuch des Sanskrit*, 2nd ed. (Heidelberg).
 Tischler, J.
 1979 "Der indogermanische Anteil am Wortschatz des Hethitischen", *Hethitisch und Indogermanisch*, 257-267.
 Thumb, A., and A. Scherer.
 1959 *Handbuch der griechischen Dialekte*, 2nd ed., vol. 2 (Heidelberg).
TLE=Testimonia Linguae Etruscae, see Pallotino 1968b.
 Tomaschek, W.
 1893-94 "Die alten Thraker", in *Sitzungsberichte der Wiener Akademie der Wissenschaften, phil.-hist. Kl.*, vols. 128, 130, 131 (Wien).
 Tonev, M.
 1939 Review of V. I. Georgiev, "Die Träger der kretisch-mykenischen Kultur", *Izvestija na Istoriceskoto družestvo* 14-15, 230-236.

- Toporov, V. N.
 1955 "Očerki istorii izučeniya drevnejšix baltoslavjanskix jazykovyx otnošenij" [Outlines of the History of the Study of Oldest Balto-Slavic Language Relations], *Učenie zapiski Instituta slavjanovedenija* 17, 248-274.
 1958 "Novejšie raboty v oblasti izučeniya balto-slavjanskix otnosenij" [The Newest Publications on the Study of Balto-Slavic Relations], *Voprosy slavjanskogo jazykoznanija* 3, 134-148.
- Tovar, A.
 1944 "Primitiva extensión geográfica del Jonio", *Emérita* 12, 253-264.
 1957 "Nochmals Ionier und Achäer im Lichte der Linear B Tafeln", in *Gedenkschrift P. Kretschmer*, vol. 2 (Wien), 188-196.
 1958 "Indo-European Layers in the Hispanic Peninsula", in *Proceedings of the Eighth International Congress of Linguists*, Oslo, 5-9.8, 1957 (Oslo), 705-720.
 1960 Review of V. I. Georgiev, *Issledovanija po sravnitel'no istoričeskomu jazykoznaniju*, *Kratylos* 5, 34-41.
- Trautmann, R.
 1923 *Baltisch-slavisches Wörterbuch* (Göttingen).
- Tret'jakov, P. N.
 1953 *Voprosy istorii* 2, 14-20.
- Trcu, M.
 1955 "Eine griechisch-karische Bilingue und ihre Bedeutung für die Geschichte der karischen Schrift", *Glotta* 34, 67-71.
- Tritsch, F. J.
 1950 "Lycian, Luwian, and Hittite", *Archiv Orientalní* 18, 1-2, 494-521.
- Tronskij, I. M.
 1953 *Očerki iz istorii latinskogo jazyka* [Outlines of the History of Latin] (Moscow, Leningrad).
- Trubačev, O. N.
 1959 *Istorija slavjanskix terminov rodstva* [The History of the Slavic Kinship Terms] (Moscow).
 1976 "O sindax i ix jazyke" [On the Sinds and their language], *Voprosy jazykoznanija* 4, 39-63.
- Uhlenbeck, C. C.
 1940-2 "Vorlateinische indogermanische Anklänge im Baskischen", *Anthropos* 35 (1940), 36 (1942), 202-207 (Freiburg).
 1948 "La langue basque et la linguistique générale", *Lingua* 1, 59-76.
- Ungnad, A.
 1923 "Luwisch-Lykisch", *Zeitschrift für Assyriologie*, NF 50, 1-8.
- Untermann, J.
 1956 Review of W. Brandenstein, *Griechische Sprachwissenschaft* 1, *Gymnasium* 63, 57-68, 114-116 (Heidelberg).
 1961 "Die venetische Sprache (seit 1950)", *Kratylos* 6, 1-16.
 1962 Review of J. Hubschmid, *Mediterrane Substrate mit besonderer Berücksichtigung des Baskischen und der west-östlichen Sprachbeziehungen*, *Indogermanische Forschungen* 67, 298-303.
 1964 "Die messapischen Personennamen", in H. Krahe, *Die Sprache der Illyrier*, vol. 2 (Wiesbaden).
- Vaillant, A.
 1950 *Grammaire comparée des langues slaves*, vol. 1 (Paris).
 1957 "L'unité linguistique balto-slave", *Filologija* 1, 23-34 (Zagreb).
- Van Brock, N.
 1962 "Dérivés nominaux en *l* du hittite et du louvite", *Revue hittite et asianique* 20, 71, 67-168.
- Van Windekens, A. J.
 1941 *Lexique étymologique des dialectes tokhariens* (Louvain).
 1944 *Morphologie comparée du tokharien* (Louvain).
 1949 "Etudes iraniennes et tokhariennes, I", *Le Muséon* 62, 1-2, 125-150, 261-274.
 1952 *Le pélasgique. Essai sur une langue indo-européenne préhellénique* (Louvain).
 1954 *Contributions à l'étude de l'onomastique pélasgique* (Louvain).
 1960 *Etudes pélasgiques* (Louvain).
 1969 "Grec *ῥέμβας* 'suffisance, satisfaction'", *Orbis* 18, 186-189.
 1970 "L'origine directe et indirecte de tocharien B *laks* 'poisson'", *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 120, 305-308.

- 1976 *Le tokharien confronté avec les autres langues indo-européennes. I. La phonétique et le vocabulaire* (Louvain).
- Vasmer, M.
- 1921 "Studien zur albanischen Wortforschung", in *Acta et commentationes Universitatis Dorpatensis* 1, 1 (Dorpat).
- 1923 *Untersuchungen über die ältesten Wohnsitze der Slaven, 1: Die Iranier im Südrussland* (Leipzig).
- 1925 "Beiträge zur slavischen Grammatik: 1. Meillet's urslavisches Sibilantendissimilationsgesetz", *Zeitschrift für slavische Philologie* 2, 54-58.
- 1941 *Die alten Bevölkerungsverhältnisse Russlands im Lichte der Sprachforschung* (Berlin).
- 1950-58 *Russisches etymologisches Wörterbuch*, vols. 1-4 (Heidelberg).
- Ventris, M.
- 1952 "The Position of the 'Eteo'-Languages", *Jahrbuch für kleinasiatische Forschung* 2, 218-223.
- Ventris, M., and J. Chadwick.
- 1953 "Evidence for Greek Dialect in the Mycenaean Archives", *Journal of Hellenic Studies* 73, 84-103.
- 1956 *Documents in Mycenaean Greek* (Cambridge).
- Vercoutter, J.
- 1954 *Egyptiens et Préhellènes* (Paris).
- Vetter, E.
- 1937 *Etruskische Wortdeutungen*, vol. 1 (Wien).
- 1939-40 "Literaturbericht 1935-1937: Etruskisch", *Glotta* 28, 117-231.
- 1940 "Berichtungen und Nachträge", *Glotta* 28, 228-231.
- 1942 "Literaturbericht 1934-38: Italische Sprachen", *Glotta* 30, 205-217.
- Vilborg, E.
- 1960 *A Tentative Grammar of Mycenaean Greek* (Stockholm, Göteborg, Uppsala).
- Vogt, H.
- 1954 Review of K. Bouda, "Baskisch-kaukasische Etymologien", *Norsk Tidsskrift for Sprogvidenskap* 17, 537-549.
- von Blumenthal, A.
- 1937 "Bericht über die Aufgaben der Erforschung altgriechischer ON", *Zeitschrift für Ortsnamenforschung* 13, 139-168, 586-590.
- von Bradtke, P.
- 1888 *Beiträge zur Kenntnis der vorhistorischen Entwicklung unseres Sprachstammes* (Gießen).
- Vorobev-Desjatovskij, V. S.
- 1956 "K voprosu o roli substrata v razvitii indoarijskix jazykov" [On the Question of the Substrate in the Development of the Indo-Arian Languages], *Sovetskoe vostokovedenie* 1, 99-110.
- Voskresenskij, M. L., and V. P. Nazarov
- 1968 "Opyt interpretacii eteokritskix nadpisej" [An Attempt at Interpretation of the Eteocretan Inscriptions], *Vestnik drevnej istorii* 2, 89-97.
- Vraciu, A.
- 1966-67 "Sovremennoje sostojanie voprosa o substratnyx elementax rumynskogo jazyka" [The Present State of the Question of the Substrate Elements in Rumanian], *Linguistique Balkanique* 11, 1, 71-107; 11, 2, 21-56.
- 1970 "Precizari în legatura cu elementul autohton din limba română" [About the Autochthonous Elements in Rumanian], *Limba română* 19, 101-116.
- 1971 "Sur la caractere autochtone des populations anciennes de la Dacie: des données linguistiques", in *L'ethnogenèse des peuples balkaniques* (Sofia), 179-192.
- Wackernagel, J.
- 1896 *Altindische Grammatik*, vol. 1 (Göttingen).
- Wagner, A.
- 1971 *Studies in the Origins of the Celts* (Belfast, Tübingen).
- Wagner, M.
- 1954 "Die Punier und ihre Sprache in Sardinien", *Die Sprache* 3, 27-43, 78-109.
- Wainwright, C. A.
- 1959 "The Teresh, the Etruscans, and Asia Minor", *Anatolian Studies* 9, 197-206.
- Walde, A., and J. B. Hofmann
- 1938-56 *Lateinisches etymologisches Wörterbuch*, 3rd ed., vols. 1-3 (Heidelberg).
- Waldc, A., and J. Pokorny

- 1927-32 *Vergleichendes Wörterbuch der indogermanischen Sprachen* vols. 1-3 (Berlin, Leipzig).
- Watkins, C.
- 1966 "Italo-Celtic Revisited", in *Ancient Indo-European Dialects*, ed. by H. Birnbaum and J. Puhvel (Berkeley, Los Angeles), 29-50.
- 1969 "Geschichte der indogermanischen Verbalflexion", in *Indogermanische Grammatik*, vol. 3 (Heidelberg), 1.
- Weber, W.
- 1925 *Die Staatenwelt des Mittelmeeres in der Frühzeit des Griechentums* (Stuttgart).
- Webster, T. B. L.
- 1955 "Homer and the Mycenaean Tablets", *Antiquity* 113, 110-159.
- 1958 *From Mycenae to Homer* (London).
- Weigand, G.
- 1921 "Die bulgarischen Rufnamen, ihre Herkunft, Kürzungen und Neubildungen", *Jahresbericht des Instituts für rumänische Sprache zu Leipzig* 26-29, 104-192.
- 1927 "Sind die Albaner die Nachkommen der Illyrier oder der Thraker?", *Balkanarchiv* 3, 205-280.
- Weinberg, S. S.
- 1965 *The Stone Age in the Aegean* (Cambridge).
- Werner, R.
- 1954a "Zur Stellung des Hieroglyphen-Hethitischen innerhalb der indogermanischen Sprachen", *Asiatische Studien* 8, 1-4, 155-162.
- 1954b "Zur Stellung des Luwischen unter den altanatolischen Sprachen", *Orientalische Literaturzeitung* 49, 293-306.
- Whatmough, J.
- 1933 *The Prae-Italic Dialects of Italy*, ed. by R. S. Conway, S. E. Johnson, J. Whatmough, vol. 2 (London).
- Winter, W. ed.
- 1963 *Evidence for Laryngeals* (The Hague).
- Wolff, K.
- 1954 "Das Indogermanentum der Räter", *Ammann-Festgabe*, vol. 2. (Innsbruck), 191-194.
- Xhuvani, A., and E. Çabej
- 1962 *Prapashtesat e gjuhes shqipe* [The Suffixes of Albanian] (Tirana).
- Young, R.
- 1969 "Old Phrygian Inscriptions from Gordion", *Hesperia* 38, 252-296.
- Zanmarrin de Savorgnan, L.
- 1963 "Appunti sull'onomastica antica dell'Istria", *Atti dell'Istituto Veneto di scienze, lettere ed arti, Classe di scienze morali e lettere* 121, 417-424.
- Zannotti, D. G.
- 1975 "Another Aspect of the Indo-European Question: a Response to P. Bosch-Gimpera", *The Journal of Indo-European Studies* 3, 255-269.
- Zeuss, K.
- 1837 *Die Deutschen und die Nachbarstämme* (Berlin).
- Zgusta, L.
- 1951 "La théorie laryngale", *Archiv Orientální* 19, 428-439.
- 1955 "Lydian Interpretations", *Archiv Orientální* 23, 510-544.
- 1957 "Die pisidischen Inschriften", *Archiv Orientální* 25, 570-610.
- 1963 "Die epichorische pisidische Anthroponymie und Sprache", *Archiv Orientální* 31, 3, 470-482.
- 1964 *Kleinasiatische Personennamen* (Prague).

Index of Words

ALBANIAN

ambël 142
 ari 57
 bukur 126
 burrë 127, 142
 çuril 345
 cap 345
 dardhë 142
 dash 178
 Dash 178
 delmë 172
 dritë 54
 dru, drutë 142
 dhjetë 55
 ëmbël 142
 giatë 138
 gjënj, gjëj, gjendem 42
 karpë 126, 142
 kut 142
 lith, lidhem 44
 magullë 344
 mal 143
 man, mand, mën 143
 mat 138
 mëz 116
 mjekër 54
 nënët 138
 (një)zet 138
 pelë 143
 pyll 142
 qeth 42
 quhem 51, 55
 ragall 345
 re, rë 173
 rrush 343
 Semen 350
 Shkodër 141
 shqer 143
 shitatë 138

sjap, sqap, thjap 345

tetë 56

Tomor 141

ulk, ujk 173

Ufqini 173

venë, verë 338

vetë 142

vënd 143

vis 143

zjarm, zjerm 142

ARMENIAN

aic 312

aitnum 145

oka, ačk 145

alam 312

atbeur 312

atkeat 145

anun 145

arawr 145, 312

ard 312

arj 57

asr 145, 312

atamn 145

ateam, ateli 145

audi 145

awr 312

całr 312

celum 43

dalar 312

damban 312

epcem 312

erastanke 312

es 58

ēš, išoy, išanke 340

gini 338

haçi 145

hav 32

hayk 145

heriwn 312

jiwn 312
 kalin, kałni 225
 mawru 312
 sin 312
 siwn 312
 šen 57
 tendium 367, 371
 uic 56
 uranam 312
 vard 102
 Virke 225
 zgenum 312

AVESTAN (IRANIAN, SEE BELOW)

arəša- 57
 axšaēna- 109
 azarəšant- 45
 azgata- 46
 azəm 58
 bāēšaza-, bišāzāni, baēšazyati 45, 54
 barəzō, barəzah- 43, 51
 bərəz- 43
 dašina- 58
 daxš- 58
 dānu- 32
 ənāxštā 57
 ərəxšō 57
 gərəda- 45
 hazah- 46, 51
 hərəzaiti 46, 51
 isaiti 43
 marəzaiti, mərəzaiti 45
 -nasaiti 57
 nāšimā 45
 pairidaēzayeiti 45, 51
 pasu- 54
 pantā 32
 pouruspaxšti- 57
 Ranhā 329
 rašayeiti 36, 57
 saed- 59
 sid(a)ra- 59
 spasyeiti 57
 sray-, srita- 55
 šoi pra- 57
 taš-, tašaiti 58
 taxš- 58
 vazaiti 57
 vazah- 57
 vāša- 57
 vāxša- 57

xšouš 58
 yazaite 46
 zoēman- 45

BASQUE

altz, alizo, alza 226
 eder 226
 gizon 227
 habe 226
 (h)azi 226
 hogey 225
 (h)ola 226
 humo 226
 ibai, ibar 225
 ibili 225
 ikoe 226
 inaga 226
 ituri 225
 jaio 226
 jo 226
 kurdi 226
 pacala 226
 parči 226
 patar 297
 puči 226
 sagar 225
 soro 226
 zanko, zankho 226
 zara 226

BULGARIAN

Agatovo 151
 Arda 351
 cap 345
 cepja, cepenica, cep 59
 cokam, cukam 341
 čerda 59
 čip 345
 čokur 344
 Devnja 346
 Ibār 351
 Iskār 346, 347, 351
 Jantra, Etār 118, 128, 129, 347, 350
 kālka 43, 51
 kĵopav 344
 kuče 39
 Lom 346, 350
 Marica 347, 351
 mogila 344
 Osām 347
 osil 44

peka, peča 24, 52

Ploudiv 149

Timok 347

Vit 128, 129, 346

CARIAN

Αδησοος 211

Βαβοας 211

γέλαν 213

γλο(ο)α (Phrygian ?) 212

*Εκατόμνωος 211

*Ιμβρασσις 211

Καδοας 211

κιζάλλης (Lydian ?) 211, 212

κοτον 212

Κολωλδος 212

kombi 212

Κοροσο = *Cressa* 210

κύβινδης, -ος, κύμινδης, -ος, κόμινδης 212

κῶς 212

Λωνδαργος 212

Mā 212

Μανσώλειον 212

Μαύσωλος, -ός 211, 212

Μονόγιο(ο)α 212

-μωνος 242

Ναντοας 211

*Οσογώ(ς), *Οσογῶα 213

Ονασσας 211

Ονασοος 211

Παρανσοωλλος 211, 213

Πιολίνδηλς 211

Σαμασσις 211

Σαμωνος 213

Σαρνσωλλος 211, 213

Σονάγγελα 213

σοῦαν 213

Σύαγγελα, -λεῖς 213

Συασσός, Soassa 215

Συένγεσις 215

Συεννία 214

Σφαγγειλαῖος 213

τάβα 214

Τάβα 214

Τυμνη(ο)ός 214

τυμνία 214

τυμνισός 214

Τύμνος, Τυμνη(ο)ός 214

ύσοός 214

Υσοωλδος 214

Υσοωλ(λ)ος 214

CELTIC

Αἶνος, *Ενος 331, 334

Danubius, Danuvius, Δανούιος 353

en (Mir) 360, 334

*Ενος, Αἶνος 331, 334

foss (OIr) 101

Isara 331

Licus 332

Renos (Rein) 335

DACIAN (DACO-MYSIAN)

adila 121, 137

*Αεδάβη 149

Αἰαδάβα 149

Αἰζίοις, Aizis, Azizis 123, 134, 137, 138

Acidava 148

*Αιούτας, Alutus 330

amalusta, amolusta, amulusta 121, 142

*Αξενος (πόντος; Iran. ?) 126

*Αξιόπα, *Αξιούπολις 108, 109, 123, 126, 127, 137

*Αξιος, *Αξιός 108, 109, 123, 137, 346, 352

Αργεδανον 148

*Αργίδαβα, Arcidava, -ba 148

Βαρδάριος, Βαρδονάριος, Ουαρδάριο; 109, 171

Bersovia, Berzobis 123

Βερεσπιος 123, 142

Βίεσσοι 134

Βοιρεβίστας, Βυρέβιοτας, Burebista 123

βουδάθλα 121, 127, 138, 139

budama 121, 138

Burridava 148

Buteridavenses 149

braterais (Mys.) 125

Gobranus 139

Gerasus, see *Γέρσας

Γερμίζερα, -ζίργα 123, 127

Germisera. -sara, -gera 123, 127

Gildoba 136, 149

Giridava, Giridavensis 136, 149

δάκινα 121, 137

Δάκοι, Δάκοι, Δάκωι, Δάκες, Daci 111, 126, 128, 137, 186

Danavis (Δανούιος) 329

Δανεδέβου 149

Δάοι, Δάοι, Δάος, Davus 111, 123

Δαούοδανα 149

Δάρδαροι, -ία 142, 185

-dava, -deva, -dava, -daba -δεβα, -δαβα,

-δανα 120, 136, 143, 148, 149

-dela, -δηλα, -δωλα, -zila 121, 139

Desudaba 149

Deusara 123

Diegis, Degis 134

διέλλενα, dielina 121, 134

Δίερα, Dierna 135

- diesapter* 110, 134
διέσημα 110, 126, 127, 137, 139
diodela 121, 138
Δοκίδανα 135, 148
δουώδηλα 121
Δροσβητίς, Drobetae 123, 142
δύν 122, 127
Ζάλδαπα 123
Ζαργίδανα 148
Ζερμίζεργα, -ζίεργα 142
Ζέρρης, Zerna(e) 135
ζήνα 122, 138
Zia 138
ziodela 121
Ziper 138
Ζιρίδανα 148
Ζισνούδεβα 149
Ζουσίδανα 148
Zyras 346
Θερμίδανα 149
Ίέρασσος 134, 330
Ίταδεβά 149
Καπίδανα, -βα, Capidava 149
Καρπάτης 123, 126, 127, 135, 142, 332
Καρσίδανα 148
κινούβοιλα 122, 127, 137
Κληπίδανα 148
κοαδάμα 122, 134, 136, 139
Κομίδανα, Cumidava 148, 149
κ(σ)υριοννηκούμ 122
κοτίατα (κοτήατα) 122, 135
Κρίσιος, Grisia 110, 123, 127, 137, 139
Λύνγρος 119, 346
mal-, (Dacia) Maluensis 123, 126, 143
μαντία, -οία, mantua 122, 143
Μάρις, Μάρισος, Marisia, Marus 127, 135, 139, 331, 334
Μαρκόδανα 148
Μιέζα (Dac.?) 171
μίζηλα 122, 138
Μοισοί, M(o)esi 137
Μοσχάι 185
Μουριδεβά 149
Μύγδανες, Μύγδων 150, 185
Μυσοί, Μυσία, Μοισοί 128, 137, 144, 185
μυσός (Mys.) 125
Νάισ(σ)ος, -ός, Naessum 142
Ώδησσός, Ώδεσσός 120, 129, 183
Ώρδησσός 330
Οδαοδάριος 109
Οθενδενίς, Vindenis 143
Οντεσπιος, -ασπιος 123, 142
Οντίδανα 148
Πάθισος, Pathissus, Πάτισος, Πάρισος 331
Ραταβίσσα -bissa 136, 143
Ραταβίς(s)e(n)sis 136, 143
Πατριδανα 148
patrizi (Mys.) 126
Πατρούισσα 136, 143
Pelendova 136, 143, 148
per 124
Perburidavenses 148
Πετροόδανα 148
Περοβορίδανα, Piroboridava 148
Πολόνδα 136, 137, 143, 148
Potaissa 136
Pulpudeva (Thr.&Dac.) 136, 149
Πρεθανήσσοι 148
Ραβών 331
Ραμίδανα 148
Rusidava 148
Sacidava 148
Sagadava 149
Salameir (palus) 110, 134
Salmorude 110
Σαλμυδησ(σ)ός 119, 123, 129, 134, 139, 153, 183
Salsovia 134, 138
Σαργίδανα 148
Saprisara 123
σέβα 122, 137, 138
Σετίδανα 148
Σινγίδανα 148
sipoax, sipotax 122, 136
Σκιδεβά 149
σκιάρη 122, 135, 143
Scorilo, Scorylo 124
Σουκίδανα, Sucidava 149
σκαλόβορ (Mys.) 125
Συκιδάβα, Συκίβιδα 149
Ταμασιδανα 149
Τάπαι 139
Τάσαντος (Iran.?) 330
Tibisia, Tisia, Τιφήσας, Τιμήσας 331
Τιβίσκος 331
Τίγας = Τίσας 331
Tierna, Tsierna, Tsiernensis 135, 139
Τίσας 331
Tzinta, Tsinta, Tzinto 135, 139
Φανάκης (Mys.) 125

ETEOCRÉTAN (LINEAR A)
asasara 91, 95
asasame 91, 93
ati 92, 93
azano 92
duwana 93
jasasara 91, 93
kaa 93
kita 92
-me 92
-mu 99, 101
na 93
ta 92
taj(a)ke 92
tanuati 93

ELYMIAN

See p. 310 — 311

ETRUSCAN

acnaš 241
 ais, eis 223, 233
 anasi 239
 an 234
 aker (Lemnos) 252
 apa 229, 232
 arai (Lemnos) 252
 aria 237
 aska 229, 232
 ati 229, 232
 atiu 233
 avil 229, 233
 avis (Lemnos) 252
 ca 241
 calu 233
 capys 229
 cela 232
 ci 223, 239
 clan, clen, clinsi 223, 233
 cluoenias 241
 culixna 242
 eca, ca 234
 eitale 241
 eni 241
 ese 239
 esi 239
 eiera(i) 242
 evisθo (Lemnos) 254
 Etruria 246, 249
 Etrusci 246, 247, 249
 holaieš, holaieši (Lemno) 252
 ia, iia 238, 239
 ica, ita 240
 itanim 241
 kacriqun 239
 lautn, lautniθu 232, 233, 242
 leu 233
 malak 233
 maras (Lemnos) 252
 masan 241
 mav (Lemnos) 252
 mex 240
 mi 234, 237
 mini 238
 morinail (Lemnos) 252, 253
 mulu 233
 mulvanice 238, 239
 murs 242
 mutna, mutana 229, 232
 mvna 248
 nac 142
 nefis 229, 242

ni 238
 nip(e) 242
 nupφ- 275
 papa 232
 prumts, prumaθs 229, 242
 pruxum 242
 pul 241
 pute(re) 242
 putes 239
 φelucu 270
 φokiasiale (Lemnos) 287, 289
 φoke (Lemnos) 252
 qutun 229, 233
 ρaov- 242
 rašn(a), rasna
 s 239
 sal 240
 sec, šex 233
 sel 241
 siasi 252
 šivat 252
 snuiap 241
 sie 239
 suθi, suti 232
 šeronai(θ) (Lemnos) 253
 tofina, θapna, θahvna 232
 tamera, tameru 241
 tamera 241
 Tartaniu 248
 taš 248
 tavaršio (Lemnos) 254
 tazv 248
 tin, tinas, tin(i)a 229, 233, 236, 237, 248
 tmia 240
 turce 180, 229, 242
 Tyγαροί, -ηροί 249
 Tusci 249
 tvl 248
 θamuce, θamce 241
 θis 239
 θui 229
 θuta 240
 θuvas 241
 -(u)m 241
 vatiexe 240

GERMAN

Aller 332
 Attel 336
 Burg 99
 Elbe 334
 Embscher 361
 Enns (Enisa) 332
 Erlaf (Arlape) 332
 Günz 332
 Iller (Ilara) 332

Imscher 332
 Inn 331, 334
 Krems 332
 Laaber (Lapara) 332
 Lachs 359
 Lech (Licus) 332
 Leitha (Litaha) 332
 Main 334
 March 331
 Naab 331
 Nette, Netze 370
 Oder 334
 Paar (Baraha) 332
 Pfalter (Peltera) 332
 Raab 331
 Regen (Regan) 332
 Traisen (Treisima, Trigisamum) 332
 Vils 332
 W'aag (Cusus) 332
 Warthe 335
 Weichsel 335
 Weser (Visara, Wisura) 335
 Wörnitz (Warinza) 332
 Ybbs 332
 Zusam (Zusme) 332

GREEK (AND PRE-GREEK)

Agassa, Agasaz 183
 Ἀζώριον, Ἀζόριον, Ἀζωρος 161
 Ἀθαμᾶνες 157
 Ἀθαμανία 157
 Ἀθάμας 157
 Ἀγινθος 180
 Ἀγίνιον 159, 162
 Αἰδηγός 155
 Αἰθικες 157
 Αἰθικία 157
 Αἰολῆς, -εῖς 160
 αἰχμή 64
 ἄκανθος 180
 Ἀκανθος 180
 Ἀκαρνᾶνες 157
 Ἀκαρνανία 157
 ἄλειφα(ε) 84, 86
 ἀλείφω 101
 Ἀλιάκμων 348, 349
 Ἀλικαρνασ(σ)ός, -ησ(σ)ος 98, 200
 Ἀλμύγη 159
 Ἀλμύνη 159
 Ἀλφειός 348, 349
 Ἀμάρυνθος 97
 Ἀμβρακία 157
 Ἀμβρακος 157
 ἄμβροτος 68
 Ἀμβρουσ(ο)ς 182

ἄμβων 100, 101
 Ἀμνιός 97, 184, 342
 ἄμπελος 339
 Ἀμύμονες 156
 Ἀμφισσα, Ἀμφιτος 182
 ἄναξ 98
 Ἀνες, Ἀονία 163, 191
 Ἀπιδανός 163
 ἄπιον, ἄπιος 343
 Ἀπταρα, Ἀπτερα, Ἀπτέρα 188
 Ἀραθθος, Ἀραιθος 158
 Ἀράκυνθος 97, 155, 179
 Ἀραξος 349
 Ἀρατθος, Arethon 158, 349
 Ἀραχθος 158, 349
 Ἀργεία 163
 Ἀργεῖοι 163
 Ἀργεῖος, Ἀργεῖος 163
 Ἀργεῖς 162
 Ἀργήμος 163, 164
 ἄργιλλα 345
 Argithea 159
 Ἀργισσα 161, 182
 Ἀργος 162, 163, 164
 Ἀρδητιός 97, 182
 ἄρα(ι)ος 36, 57
 ἀροτοκόπος 65
 ἄροτος 260
 ἄσάμυνθος 98, 101, 105
 Ἀσπενδος 97
 ἄσπης 98
 ἄστυ 100, 101
 Ἀστυπάλαια 165
 ἀσύφηλος 104
 ἀτέμβω 100, 101
 Ἀτθίς, Ἀθθικός, Ἀττικός 155, 191
 Ἀττιᾶνες, -(ι)οι 156
 ἀτροκῆς 66
 ἀτύζομαι 101
 ἄφνε(ι)ός 101
 ἄφνος, ἄφενος 100, 101
 Ἀχαῖα 163
 Ἀχαι(F)οί 105, 163
 Ἀχελῷος 154, 341, 348, 350
 Ἀχέρων 157
 Βαίτυλος 344
 βάκανον 343
 βαλιδός 101
 βάλλω 32
 βασιλεύς 98
 βάσκανος 101
 Βατῖαι 159
 βαῦνος, βαννός 98
 Βαφύρας 161
 Βένκασος 97
 Βερέκυνθος 97, 155, 179
 Βοῖον 158
 Βολι(σ)ός 182
 Βουθρωτός, -όν, Βούθρωτος 159
 Βούνειμα 159
 Βουχετός, Βούχετα, -χέτιον 159
 βραβεύς 98

Βρένθη 179
βρέτας 101
Βυλῆσ(σ)ός 97
γατα 101
Γαργαρία 341
Γαργητιάς 97, 182
γέρανος 59
γῆ, γᾶ, γῆη 101
Gitanæ 158
Gonprocondylos 162
Γόννος, -οι, -ον 161
Γραικοί 186
Γυρτών, Γυρτώνη 161
δα 116
Δαμάτηρ 106
Δεξαμεναί 159
δεύω 102
Δημήτηρ 106
δίδωμι 31
διθύραμβος 98
Διρφωσός 97
δυώς 260
Δόλοψ, Δόλοπες 157
Δολοπία 157
δονέω 102
δοῦλος, δῶλος 65, 66
† Δορῆτις 164
δροίτη 101
δρόσος 102
Δρύοπες 157
Δρυοπία 157
Δρύοψ 157
δύναμαι, δύναμις 102
δω 82, 86
Ἑγγελεῖς, -έλεις 156
Ἑγγέλη 156
ἐνώ, ἐών 58
ἐδηδών 31
εἴκω 100, 102
Εἰλισσών 179
ειρήνη 98
εἰς, ἐν 65
Ἐλα(F)ον 35, 102, 339
Ελαον 158
Ἑλλα 159
Ἑλλάς 159
Ἑλληνες 159, 159, 186
Ἑλλοί 159
Ἑλλοπες, Ἑλλοπία, -τη 156
ἐλ(λ)οψ 156
ἐλμυς, ἐλμυνθος 100, 102
Ἑλυμία 259
Ἑλυμιῶται, -ιμιῶται 259
Ἑλυμνία 259
Ἑλύμνιον 259
ἐλυμος 259
Ἐπιπύς 161
Ἐρσίνος 154, 341
ἐρ(ε)κκη 161
Ereikynion, Ericinium 161
Ἐρσ(σ)ός 182

† Ἐοίδιμα 164
Ἐρικισῶσα 160
Ἐρμάτιος 182
Ἐρύμανθος 97, 179
Εὔηνος 349
Εὔροια 159
Εὔρυμεναί 159
Εὔρώτις 161, 348, 349
Ἐφνρεα, Ἐφύρεα 159, 353
Ζάκυνθος 97, 155, 179
Ἡλώνη, Ἡλώνη 161
Ἡπειρός 156
Theion 159
Θεναί 259
θεράπνη 100, 102
Θεσσαλοί, Θεσσαλία 160
Θεσπρωτοί, -ια 157
Θεσπρωτός 157
Θήβαι, Θήβη 155
θυίαμβος 98
θυρικός 98
Θρόνιον 159
Θυρήσιοι († Ὀρνησιοι) 164
Θύαμις 157
θύρσος 98
Θώμη 162
Ἰάορες, Ἰώνες 191
Ἰασον (Ἰαργος), Ἰασος, Ἰασ(σ)ός 162, 184
Ἰάων 160
Ἰβηρ, Ἰβηρες, Ἰβηροι, Ἰβηρία 224, 341, 353
ἰδη 102
Ἰδομένη 158
Ἰθώμη 162
Ἰλιον 159
Ἰλο(σ)ός 97, 184, 342
Ἰνυχος 154, 342, 348, 350
Ἰστώνη 160
ιχώρ, ιχώ 83, 86
Ἰων 160
Ἰωνες 160
Κάδμος 158
Καίρατος 164, 183
Καλάμισα 183
κάλον 183
Κάλυδνα, Καλύμνα 97, 259
Καλυδών 164, 259
κάλως 98
Καμμανία, Καμμανοί 156
κάπηλος 98
κάππαρις 343
Καρνησόπολις 200
Καρύανδα 98
Κασσιόπα, -η 157
Κασσωπᾶς 157
Κάσσωπες 157
Κασσώπη 157
Κασσωποί, Κασσωπία 157
Κασσωπῆς 157
Κάτρη, Κατρεῦς 189, 190
Καύκασα 353, 354

Κανκάσιον ὄρος 353, 354

Καύκασος 353

καῦκον 354

Καύκων 354

καυχός, χαλκός 82

κεβ(α)λή 167, 168

κεβλήγη 167

κεβλήγονος 167

κεβλήπυρις 167

κέβλος 167

κέρασος 183

Κέρασος 183

Κεράσσαι 183

Κερασούς 183

Κεραύσιον 183

Κερησός 97

Κεστρία, Κεστρίνη 156

κῆλον, κᾶλον 183

Κηλώσσα 183

κήξ 181

Κήρινθος 97

Κητιός, Κητιός 97, 181

Κηφισιά 155

Κηφισ(ο)ός, Καφισός 97, 155, 184, 341, 350

κιθάρα 98

κίκνυς 102

κίνδινος 98

Κνωσ(ο)ός, Κνώσιοι 97, 183

Κολ(λ)υτ(τ)ός 182

Κόμαρος 159

Κόρινθος 97, 180

Κόρυθα 160

Κορόντα 180

Κόρινθος 180

Κορυφάσιον 183

Κόσκυνθος 97, 180

Κουάριος 160

Κουράλιος 160

Κράνια, *Crania* 158, 159

Κρήτες 190

Κρήτη 190

Κύδων, Κύδωνες 88, 193

Κυδωνία 88

κυκαν- 84

κυκάω 84

κυκε(ι)ώ 84, 86

κυκε(ι)ών 84

Κύνθος 97, 155, 179

κυπάρισσος 98, 339

κύπε(ι)ρος, κύπαιρος, -ον 98

κύτισος 343

Κυφαρισσία, Κυφαρισσίας 339

κυφαρίσιμος 339

Κωκνιός 157

λαβύρινθος 180

Λαβύρινθος 97, 180

Λάδων 179

Λακμός, Λακμών 158

λαός 98

Λαπαθοός 162

Λάρις(α) 155, 184

Λαρισάται πέτραι 155

Λάρις(α) 155, 342

λαγή 102

Λειμώνη 161

Λευκίμμη 160

Ληθαίος = Λιθαίος 160

Λήσσα 183

Λίβηθρα 161

Λύγκιος 158

Λύγκος 158

λυκάβας 182

Λυκαβητιός, -αττός 97, 182

Λύκτος, Λύττος 189

Malthace 160

Μάλλ(λ)οια 161

Μάροπησσα 97, 183

Μεθώνη, Μηθώνη 162

Μελίβοια 162

μίνθη, μίνθα 102

μίνθος 102

Μίτνυς 161

Μολοσσία, -τία 157

Μολοσοί 157, 182

Μολοσσός, -τ(τ)ός 157, 182

Μυκάλη 184

Μυκαλησ(ο)ός 97, 184

Μυκήνη 259

Μύλαι, Μυλαί 161

Μύλασ(α) 184

νάρκισσος 98

ναός, νηός, ναός, ναός 102

Νυμφασία 183

*Ορχεσμός 158

*Οθονοί, *Othonos*, (*Othronos* ?) 160

*Οθρωνός 160

οἶνη 337, 338

οἶνος, Φοῖνος 35, 66, 217, 337, 338

Οἶνος 179

Οἰνόανδα 98, 197

*Ολοσσών, *Ολοσσών 161

*Ολ.παι, -η 159

*Ολυμπος 158

ὄλυνθος 98, 180

*Ολυνθος 180

*Ομφάλιον 158

ὄμφαξ 100, 102

ὄνος 337, 340

*Οξόνεια 162

*Ορέσται 157

*Ορεσία 157

† *Ορησός 164

Παγασάι, -άση, *Pagasa* 183

Παλαίοι 189

Παλῶεις 157

Παμβώτης λίμνη 157

Παμσός, Πάμισος 97, 182

Πανισός 184

Πάξος, Παξοί 160

Παρανάι, -αῖοι 156

Παργασ(ο)ός 97

Παρωραία, -αῖοι 156

Πασσαρώων 159
Πελασγικός, -σικός 107
Πελασγοί 107
Πέλιγνα, -ίνα, -ινάτων, -ηγάτων 162
πέργαμον, -ος 102
Περραιβοί, -ία 157
πέτρα 98
Πέτρας 179
Πήδασος, -α 182
Πηγεῖος 160, 349
Πιάλια 161
Πιδάσα 182
Πιερία, Πίερες 160
Πίερος 185
Πίνδος 156, 158
πλίνθος 98, 102
Ποικιλασός, -άσιον 97, 184
Ποικίλη, -ίλιον 184
Πραιός 97, 182
Προπέανθος 97
Πρίανσος, Πραιός 182
Πρωασός 182
Πρινόεσσα 160
Προβάλι(ν)θος 97, 180
Πτελέσιον 183
Πτυχία 160
Πύθιον 161
πύργος 100, 102
Πύραυλος 97, 180
Πύρασος 97, 183
πύργος 98, 99, 100
Πυροφλεγέθων 179
πυρός 260
ρύγχω, ρύγχος 102
ῤιον, ῤιον 78
ῤόδον 98, 102
ῤύγχος 102
ῤυπασός 183
ῤύτιον 183
Σαλαμίς 155
Σάλμις 155
Σαλμώνη, Σαλαμώννα 155, 342
Σάμινθος 97, 180
σάμος 180
σάτες (Dor.) 65
σαφής 104
σέλις 100, 102
σελῖς 102
σέλιμα 102
σῆτες (Ion.) 65
σιγάω 100, 102
σιγή 100, 102
σιγηλός, -αλός 201
σίτος 98, 100, 102
σκάφη 101
σκαφίς 101
σμίλινθος 103
σμίς 103
σοφός 104
Σπάτιος 182
Σπερχεῖος 348, 349
Στύμφαλος 165

Σύβαρις 342
Σύβοτα 160
σύνων 98
σῦλον, σῦλη, συλάω 100, 103
Συπαληττός, -υττός 97, 182
Σύρωνθος 180
Σύρος 180
οὐς 100, 103
Σῦς 161
συφε(ι)ός, συφός 103
σφῆξ 98
Σφῆττιοι 182
Σφηττός, -οί 97, 182
Ταφιασός 97, 184
Τάφιον ὄρος 184
ταχύς 100, 103
Τέκμων 159
τέκτων 36, 58
Τελμησ(ο)ός 184
τέρβινθος 103
τερβινθος 98, 103
Τερμίλαι, Τρέ- 90
τέρμινθος, τρέμινθος 103
Τευμασιγένης 183
Τεύμης 183
Τευμησιος λόφος 183
Τευμησ(α)ός, -ισόν 97, 183
τῆτες 65
Τλασσα, -ος 183
τίκτω 36
Τλνδη 156
Τίονης 97
Τιτάριον 161
Τίταρον, -ρών 161
Τόμαρος, Τμάρος, Τομοῦρον, Tomarus 158
Τορύννη, -ώννη 159
Trachia 160
τρέπω 66
Τρικαῖτοι 162
Τρίκ(κ)η, -α 162
Τρικόνυθος 97, 180
τρόπος 66
Τυλισ(σ)ός 97, 184, 200
τύμβος 100, 103
τύραννος 98
Τύρισσα 182
τύρις 98, 100, 103
δάκινθος, Ὑάκινθος 97, 98, 180
Ὑητός 97, 182
υῖήν, υῖόν 66
Ὑμητός, -σός 97, 181, 182
Ὑρίη 159
Phaika 161
Φαιτός, Φαῖτος 88, 188
Φάλακρον 160
φάλανθος 180
Φάλανθος 180
Φάλαννα, -ος 161
Φαλώρη, -ώρη, Phaloria 162
Φανόση 158
Φαρκάδων, -ιδών, -ηδών 162

Phayttos 156
φειλέως, φειλλά, -la 103
φιαρός 103
Φοινίκη 158
φῶκος 103
Φυλάκη 159
φύλαξ, φυλακός 100, 103
Φωτική 159
χακευF (Cyp.) 85
Χάονες, Χαονία 156
Χάων 156
Χειμέριον 158
χιτών 66, 67
Χοιρεῖται 186
χρυσός 66, 67
Χυρεΐται, Cyretiae 161
᾽Ωγήν, ᾽Ωγηγός, ᾽Ωγεγος 213
᾽Ωγεΐδαι 213
ὠκεανός 213
᾽Ωρικος, ᾽Ωρικοί 158
᾽Ωρωπός 157

MYCENAEAN GREEK (LINEAR B)

aikasama 64, 80
aiza 181
akerese 70, 73
akerewa, akereu 69
aketirija 69, 73
aketira₂ 69, 73
akittito 67, 72
akorota 67
akorowe 67
akotono 67, 72
akuro 80
aminiso 106
amo 68, 72
amotejonade 56
anamoto 67
anono 68
anowe 68
anowoto 68
apatawa 188
apeasa 67, 68, 72, 73
apeeke 83
api 80
apiqoto 68
apu 67, 70
aqija 66
araromotemeno 80
arepa 68, 84
arepazoo, arepozoo 68, 72
aresanie 69, 70
a₂rie 69
asamito 105
atarasijo 68
aterewija 69
a₂tero=hatero 72
atopoqo 65
atoroqo 66
dakasanata 80
damo 80

dode 82
didosi 67
diwe 69
doero 65
doromeu 82
dose 83
dosomo 80
dowejo 72
ekera₂wo, ekerawone 83
ekosi 67
ekoso 188
eme 65
enaripoto 65
eneka 68, 69
enewopeza, enewopezo 68
epi 65
era 188
erapemena 68, 69
erapo, erapija 72, 78
erateijo 78
erato(de) 78
eree 69, 70, 72
erepate(j)o 72
eropaketai 72, 78
eropakeu 78
esareu, esarewija 69
esoto 65
euketo 65
hatero=a₂tero
idomeneja 69
ijawone 75
ijereja 69
inamata 70
isukowodoto 80
akeu 85
kakijo 72
kako 80
kapo 68
karaapi 68
karadoro 78
katarai 190
keijakarana 78
kemaqeme 68, 69, 73
kirijo(de), kirijo(te) 188
konoso 106
korete 82
koretere, koreteri 70
korisijo 67
korito 67, 105, 106
kosamato 80
kotoina 68, 82
kotona 68
kuruso 67, 69, 72
kusu 70
kutesejo 72
kuteso 72
meretirija 69, 73
meretira₂ 69, 73
meta 72

miratija 68
misarajo 80
opawota 68
opi 65
orene(j)a 72
orumato 105, 179
otera 69, 73
otinawo 68
otira₂ 69, 73
otirija 69, 73
paīto 88, 188
pa₂koweījo 188
paraku 67
pate 80
pawea, *pawea₂*=*paweha* 68, 72
peda 72
pekitira₂ 69
pema 68, 72
pemo 67, 68, 72
perusiniwa, *perusinuwo* 80
pia₂ra 70, 105
pijera 70
polo 64
pome 80
ponike(j)a 72
ponikija 72
popureja 69, 72
popuro₂ 69, 72
porena 73
posedao, *posedaone*, *pasedaoni* 70
posi 67

qamisijo 182
qamo 188
qarajo 189
qasarowe 189
qetoropopi 68, 72
qoo 69

rapitira₂ 68, 69
rapie 68, 69, 72
rawakesijo 67
rijo 69, 78
riyono 189
rimene 78
rukito 189

serino 105
sito 105
sitopoqo 65
su- 105

tatiqoweu 68
teo 69
tereja 72
terejae 69
tinwasija, *tinwasijo* 68
tinwati, *tinwatijao* 68
topeza 68, 72
toroqejomeno 66, 72
toroqo 66
tosone 72
turiso 106

wanakate 69
wanakatero 76
wareukara 165
watu 105
wejewe 66
werekarata 80
wereke 80
weto 69
wirinitjo, *wirinejo*, *wirineo* 69, 72
wisowo 80
wodowe 69, 76
wonasi 66
wonoqoso 85
wonoqosoqe 85
worokijonejo 80
woze(e) 69

zakusijo 67
zawete 65
zeijakarana 78

GREEK OF PHAISTOS (LINEAR A)

alu 95

datara, *dataro* 94, 95

kaku 95
kapa 94, 95
kaudeta 94, 95
kiro 95
kudo 95
kudoni 95
kumina 95
kuruku 95
kuro 94

makarite 95
maru 95
mate 95

pa 94
papa 94
pataqe 94
pitaja 95
pitakase 95
poto 95
puko 94, 95

qapa₂ 94, 95
qe 95

sara₂ 95

te 94

uminaī 95

HITTITE

Ahhiyawa 163
aika- 202
aikawartanna 202, 313
Alpassiya- 199
am(m)uk, *animel* 200
Arnuwandas 198
Arzawa, *Arzauwa* 163
assu(ssani)- 56, 202

- attallas 201
 auriyala- 201
 esharnuwant- 197
 (e)eshar, ishar 83, 197
 happinakh- 101
 happinant- 101
 happines- 101
 Harpand/ta 198
 Harranassa (Hurrana) 199
 Harsalassi 199
 hartaggas 36, 57
 Haruanda 198
 heman(ta)- 197
 huhhas 32
 Irhanda 198, 199
 Irhassa 199
 ishassara- 91
 ispantuzziyala- 201
 Kapanuwanta 198
 kemant- 197
 kemi 197
 kunant- 197
 Kuranda 198
 Kuriwanda 180, 198
 Kuwalapassi 199
 lahhiyala- 201
 Lalanda 198
 Lalawainta 198
 luuwili 201
 Mammanta 198
 Marassand/ta 198
 Millawanda 198
 nāsili, nīsili, nēsumnili 254
 nawartanna- 202, 313
 Nesa 254
 Panissa 184
 panza- 49, 53
 panzawartanna- 202, 313
 parn(a)-, parnant- 179, 197
 parnalli- 201
 Parnassa 199
 peruna-, perunant- 179, 197
 Petassa 200
 Puranda 180, 198
 Salessa 200
 samankurwant- 179, 197
 sattawartanna- 202, 313
 Sibidunda 198
 suppa-, suppi- 104
 Tarhu-, Tarhun(a)-, Tarhund(a)- 200
 Tarhuntassa/i- 200
 Dattassa 200
 terawartanna 313
 Tiwatassa 200
 uk, ug(g)a 58
 Uruwandas 179, 199
 Wargassa 200
 Wistawanda 199
 witassa- (=wetassa-) 198
 wiyan(a)- 338
 Wiyanawanda 179, 197 199
- ILLYRIAN
 Almus mons 177
 Alōr 176
 Aous 176
 Aplo 201, 202
 Arion 176
 Ardaxanos 176
 Arsia 177
 Artus 178
 Asamum (Dac?) 177
 "Αῖπος, Apsus, (Byzant.) "Αοσιον 350
 Ἀῖπος, Aous, Αἶας, Αῖος 350
 Barbanna 173
 Bardylis 173
 Bolonros 173
 Clausal 173 176
 Codrio(ne) 173,
 Dalmana 172
 Dalmisium 172
 Dasa(s) 178
 Das(s)ius 178
 Δελμ- (Δαλμ-) 172, 176
 Δελμαρία, Δελμαῖται, Δαλμ- 172
 Δελμίνιον 172
 Δελδάει 173
 Dibolia 173
 Dimallum 173
 Dizeros 176
 Dravos, Δράβος, Δράως, Dravus, Draus 334,
 352
 Δρεῖνος, Δρυνᾶ, Drinus 172, 352
 Drinus (Drinon), Δρίλων, Drilon 352
 Eordatoi 173
 Epilicus 176
 Genusus 176
 Hebros, Ἑβρος 177
 Ἰάδρος, Iader (Iadro) 172
 Iasae 176
 Κόλαπις, Colapis, Colapius (Κόλοις, Κόλοπος,
 Κόλοπα) 352
 Kopeina 173
 Longarus 150, 173
 Loranum 173
 Maluntum 173
 Μάργος (Βάργος), Margus, -is (Dac?) 352
 Masus 202
 Menda 178
 Monunios 150, 173
 Morkos 173
 Νάρων, Naro, Nar, Nerenum 173, 176, 348, 352

Nebris 178
Neda (Ill?) 173
Nestos 177
Oidantion 173
Oivús, Oineus 176, 349, 352
Onastini 173
Orgomenai 173
ρίνος 173
Rizon 176
sabaia 173
Salangōn 176
Savus, Saus, Σαῦος, Σάουος 176, 353
Sirmium, Sermium 177
scard- 176
Σκάρδον 172, 173
Scardona, Σκάρδων 172
Σκαρδῶνα νῆσος 172
Σκῶδρα, Scodra 141, 173
sybina 173
Taulantii 173
Taur- 178
Teutana 173
Tilurus 176
Titus 176
Ulc- 173, 176
Ulcirus 173
Ulcisia (castra) 173
Ulcudius 178
Urpanus, Urbanus 353
Verzo 178

IRANIAN (AVESTAN, SEE ABOVE)

"Αξιενος 328
axšaēna- 328
Βογυσθῆνης 329
Δάναπρις 329
Danastius, Danaster, Δάναστρις 329
don (Oss.) 32
ford (Oss.) 330
Ματόας (Scyth.) 329
Ναράκιον, Νάγκηος 330
Νάπαρις 330
Πόρατα, Πρωστός 330
Ῥᾱ 329
Τάναϊς 329
Τιάραντος (Dac.?) 330
Τύρης, -ας 329
Υπανις 329

LATIN

Albani, Albania 224
Albanus 224

asinus 340
avus 32
camox 259
cippus 59
cor 223
Danuuius 333
edo 31
ego 58
Etruria, Etrusci 246-, 25
grus 59
Iberi, Iberes, Iberus, Hiberi 224
sapiens 104
socius 60
torqueo 66
trepo 66
Tusci 247—250
ursus 36, 57
vinum 217, 338
vitis 66, 338

LETTISH

Adula 336
asmens 54
lūsis 59

LIGURIAN

See p. 302

LITHUANIAN

Akālė 341
akmuõ 45, 54
akúolas 44
aš, eš 58
āšmens 54
ašmuõ 54
aštuonl 56
ašvienis 56
dėšim(ts) 49, 55
dėšinas 58
gėrve 59
kerdziūs 59
keturì 49
klausai, klausyti 20, 44, 51, 55
kūlše, kulšis 43, 51
lājus 339
lāšis, lašiša 359
laūkās 59
laūžiū, laūžti 46
lušis 59
lūžis 46
Nėmunas 334
pėkus 54
piešimas 50
piešiū 50

skerdžius 59
 skiedà, skiedrà, skiedarà 59
 skiedžu, skiesti 59
 smakrà 54
 šaukti 45
 šeiū 43, 44
 šeřmens 44
 šerti 44
 šeřuras 44, 54
 šimtas 55
 šliejū, šliėti 55
 šokti 44
 tašaũ, tašyti 58
 žařdas 45
 žąsis 43, 54
 žvaigždė 43
 žveris 52, 55

LUWIAN

See p. 196.

HIEROGLYPHIC LUWIAN

See p. 202—203.

LYCIAN (TERMILIAN)

See p. 204—207.

LYDIAN

See p. 208—209.

MACEDONIAN

αβροῦτες 167, 168
 ἀδῆ 167, 169
 ἀδραία 167, 169
 Αἰγανέη 166
 ἀκρουνοί 167
 ἄλιζα 169
 ἄλλη 168
 Ἀνάδραμος 120
 ἀργίπους 167, 168
 ἀρκόν 167
 Ἀρραβαίος 168

βαβροήν 167, 168
 Βάλακρος 167
 Βάλλα 166
 Βαγοῦς, -οῦντος 166
 Begorrites lacus 170
 Βερενίκη 167
 Βεριμον 167
 Βέρον 167
 Βε(ρ)οια (Βερόη), Verija 167
 Βλιππος 167
 Βορα (mons) 166, 167, 168
 Βόρβορος 166

γαβαλάν 168
 γόδα 167
 Γορπιαῖος 170

δάνος 167, 168
 Δάσρων 167, 168
 δάρυλλος 167, 168
 Δινδορύμη 117, 170
 δράμης 168
 δρῆες 169
 δῶρας 167

Ἐδεσσα 120, 170, 183
 Εἰδομένη, -ή 171
 Ἐλυ(α)ία, -εια, -ιαί, -ίμοι 166
 Ἐλυμιῶται, Ἐλυμ- (Ἐλεμ-) 166
 Ἐλυμα 166
 Ἐορδαϊκός ποταμός 170
 Ἐορδία, Ἐορδαία 170
 Ἐορδοί, Ἐορτος, Ἐορδός 170

ινδέα 168

Cambunii montes 166

Castoris lacus 166

κεβαλή 167, 168

Κεβαλίνος 167

Κέβαλος 167

Celetrum (Gr. ?) 166

Κιτάριον ὄρος 170

Κίτρον, -ος 170

κόμβος 167

κοιμάραι 168

Κόρραγος 167, 168

Κραταία 171

Κύννα 169

κυνούπες 167, 168

Λᾶγος 167

Λυδίας, Λουδίας (Ill. ? Dac. ?) 171

Μακεδόνας, -νία 166

Μάκετα, Μακετα 166

Ὀλιγανος 120, 166, 168

Πέλλα 167

ῥάματα 167, 168

Rhoedias 170

τελεσίς 167, 168, 170

Τρά(γ)ιλος 169

MESSAPIC

See p. 307—308.

OLD BULGARIAN (= OCS)

azŭ, jazŭ, azī 58

brīsnŭti 43

cępiti 59

cęvi 43, 44, 50

cęviŭ 43, 44, 45, 51

čŭstŭ 59

črěda 44, 59

damŭ 31

desęti 49

des(i)nŭ 58

(d)zvězda 43, 46

(d)zvizdati 46

gōši 43, 44, 46, 54

građū 43, 44, 51

jaml 31

kamy 43, 44, 45, 54

klazniti 51

klēsiti 51

klēti 51, 55

kloniti 43, 51

klūka 43, 51

kopyto 43, 44

kosa 43, 44, 46, 50

kosū 46

kotora 43, 44

krava 43, 44

kromiti 43

krotūkū 43

krūma 44, 50

kūxnōti 44, 51

luča 43, 59

luči 59

lysū 59

osmī 56

ostrū 44

pišō 44

Plūpūdivū 136

žeravī 59

žrldī 44

rysī 59

skakati 44

skokū 44

slušati 20, 44, 55

sluxū 47

srīna 43

srīsti 47

slēni, sēni 43, 44

ūsū, sysati 47

svekrū, svekry 44, 45, 46, 54

svētū 43, 55

svētū 44, 51

svistū 47

svitēti 51, 55

svobodī 123

sysati 47

tešō, tesati 58

-trūgati 44

-trūgnōti 44

ukropū 43

zoveiū 54

zvěrl 52, 55

OLD PRUSSIAN

ackons 50

balgan 44

balśinis 44

es, as 58

pecku 54

skīstan 59

uschts 58

PHRYGIAN (AND BRYGIAN)

αββερεσι(αι), -ετορ, αββερετορ 130

αδ- 130

αδδακεσι(αι), -ετορ 130

αζήν, αζένα 129, 144, 145

αι 130

ακαλα, ακκαλος 130, 154

ακκε 130

Ἀμνδών, Ἀβνδών (Mac. P) 172

αν- 130

Ἀνανα 248

αργου 130

Ἀστίβος (Mac. P) 172

Ἀχέλης, Ἀκέλης 154

βαλ(λ)ήν, -ήνος 129

βά(μ)βαλον 129, 131, 132

βέδν 128, 129

βέκος 129, 131, 132

βεοσιοι 130, 132

βερεκύνδα 129

Βοττία (Mac. P) 171

Βοττιαῖοι 171

βοαιρε 130, 132

Βόλγες, -γοι 143, 171

Βουάνιος (Mac. P) 172

Βούγες, -γοι, Βούγαι 143

Βούκες, -καί, -κεις 143

γέλαρος 129

γλουρός, γλούρεα 129

δαδιτι 130

δακαρ(εν) 130

δακετ 130

δάος 129

διως 130

δουμος 129, 132

εδαες 130

ειροι, ιροι 130

ειτου 130

εξις 129, 144

Ἐρίγων 119, 348, 352

εοταες 130

ετι 130

Φανακτι 130

Φεβρι 131, 132

Φεν αΦτην 130

ζέλμα 130, 144, 145

ζέτνα 130, 144, 145

ζεμάν 130, 132, 144

ιος, ιοοκε 130, 131

κακο(v)ν, κακιν, -εν 130

καγ- 130

κε 130

Kéllai (*Thr.*?) 195

κίκλη 130

κίμωρος 130

κνουμαν(ει) 130

κος 130, 131

μανκαι 130

ματαρ, ματεραν 130

με 130

μεμ, μεμς 286

ονομαν 131, 132

ορου 131

οτε 131

ουεγω 131

ουεκρο- 131, 132

οιυτετο 131

ουτα 131

Παλорες (*Ill.*? *Mac.*?) 171

πικέριον 130

πυρ- 130

οα(ι) 131

οεμου(ν), οεμον, οεμν 131

οι 131

Σκοῦποι, Scupi (*Mac.*?) 172

Στύβεργα, Stuberra (*Mac.*?) 172

τα 131

(τ)τευικμενος 131

τιμον 131

τιος 131

τιοκ(ε) 131

τεντοοσ, τοτοοο 131, 132

Φρύγες 185

RAETIC

See p. 303—304

RUMANIAN

Alt, Olt 330

argea 345

Argeș(ul) 330

bucura 126

Buzău 330

druete 142

Dunăre 334

jup, jep 344

măgură 344

mal 126

Mureș(ul) 334

Olt(ul) 330, 335

Siret(ul) 330

Timis 331

țap 345

Vede, Vede 128, 331

RUSSIAN

brosat', brosit', brokat' 43

Bug 333

Desna 334

Dnieper 334

Dniester 334

Don 334

Donetz 334

Pripet, Pripjet 335

Pрут 335

Volga 329

volglyj 329

zorod 43

SANSKRIT

adṛśat, adarśat, adrāk 40, 45, 46

ahām 58

ākṣaḥ 57

aṣṭā(u) 56

aṣīti- (*Ved.*) 56

aśmā, aśman- 43, 44, 54

aśva- 56

āśv(i)ya- 56

bhāṣ- 318

bhīṣak, bhīṣakti, bheṣaja- 45, 51

chedhayati 59

chidrā- 59

chinatti, chindati 59

dadāmi 31

dadarśa 50

dākṣaḥ 57

dākṣati 57

dakṣīṇaḥ 57, 58

daśa 55

daśasyati 58

dānu 32

dēgdhi, digdhā- 45, 51

dik, diśi, diśati 45, 46, 50, 57

dr̥k, dr̥śi 46, 50, 57

dr̥śayati 54

dr̥śṭaḥ, dr̥śṭiḥ 54

dr̥śyate 54

dhānvati, dhanāyati 32

gr̥ha- 45

hāvate 54

hāyati 50

hrāduni- 51

irasya- 316

jāgara, jagara 45

jāratī, jūryati, jīryati 45

jarant- 45, 50

jighāyā 45, 50

kalyāḥ 50

kanyā 316

karbara-, karvara-, kabara-, karbura-, kar-

bu-, 45, 50, 316

karṇaḥ 45

kevalaḥ 50

klam-, śram- 45

kṣeti, kṣiyati 57

kṣiti- 57
lōkate, locate 59
mārjyati 45
mārṣṭi, mṛjati 45
nāṣati 45, 57
nirmṛgra- 45
pac- 24, 52
palita- 316
paraśu- 316
paśū, paśuḥ 54
pāśyati 50
pimśāti 45
pinkte 44, 45, 50
praṇak 45, 57
praś- 57
rākṣas- 36, 57
rekḥā 46
rikhati, riśati 46
ṛkṣaḥ 36, 57
roka- 46, 59
ṛtvik 46, 57
rujati, ruṇa- 46
rūkmant- 59
rukṣa- 55
rūśant- 46, 59
saghnōti 46, 51
sahasra- 316
sahale 46
saras- 316
sargah 46, 51
sarjati, śrṣṭa- 46, 51
spāśati 57
svadanam 316
śaphaḥ 43, 44
śārdhaḥ, śardhas- 59
śarvara- 45
śasati 43, 50
śatam 55
śatruḥ 43, 44
śepaḥ, śepaḥ 59
ślāghate 51
śleṣayati 51
śrāmyati 43, 51
śrapayati 43, 51
śrathṇāti 43, 51
śrāṇayati 43, 51
śṛṇōti 51
śroṣati 51, 55
śrotṛa- 51
śūkḥ 45
śvasiti 44, 51
śvaśuraḥ 54
śvetāḥ 51
śvitnā-, śvitṛa- 51
śaṣ-, śaṭ 58
takṣā, takṣan- 36
takṣati 36, 58
tiṣṭhati 32
tṛṇedhi 44

vacas- 316
vahas- 316
vatsa- 316
yājate 46, 51, 57
yāga- 46, 51
zāra- 316

SERBOCROATIAN

blazina 44
Bosna 352
Bosut 352
Bosuta 352
cap 345
čib 345
čokur 344
čopav 344
čot 344
Drava 352
Drin 352
Drina 352
gandoj 344
Kulpa 352
Kupa 352
maginja 343
Morava 352
Neretva 352
Sava 353
timor 344
Una 349, 352
Vrbas 353

THRACIAN

Agatapara 151
"Αθρος 118, 128, 129, 176, 347, 349, 350
Αθρυπα 151
Αϊζική 113
Αλμος 332
Αλααιβρινος 152
"Αλμος, Almus 177, 336, 346, 350
"Αρζος, -ον, Arzus, Arsus 113, 177, 351
Arisbos 176
"Αρτάκης, "Αρτακος, -ιοι 176
"Αρτάνης 118, 176, 346
"Αρτισκος 118, 176
āsā 112
Asamus (Dac. ?) 109, 110, 113, 177, 347, 348
"Ασμοῦς, "Ασημος, -μα 109
"Ατλας 118, 176, 336, 346
Αὐθιπάρου 151
Αυλονζηνς 113
Αυλουκηνθος 113
Αἶθρας 176, 346
"Αχελῶς, -ῶν, -ον 118

- Βαζοπαρά* 151
Βέβρυκες 111
Bedizos 152
Βενδιπαρά 151
Beodizos 152
Βέπαρά 151
Βέργη, -α (Mac. ?) 113
Bessapara 151
Bersamae 113
Βηλαιδιπαρά 151
Βηρίπαρά 151
Biblos 176
Βολβαβρυγινος 152
βόλωνος 112, 119, 127, 128
Βόσπαρά 151
Burdapa 113
Burtudizos, Βουρτούδεζον 113, 152
Βρέ 152
Βρέα 152
Breierophara 151
Brendice 113
Βρεντοπαρά 113
βρία, bria 112, 120, 150, 152, 153, 176
βούζα 112
Βούπαρο(ν) 151
βρυγχός 112, 119, 127, 128
βρύτος, -ον, βρούτος, βρύτα 112
Βυαιπαρηγή 151
Βυζάντιον, -ιοι 111, 113
Βύζας, -ης, -ος 111, 113, 119
Βυσαῖται 111
Γέλουπαρά 151
γέντιον, -τα 112
Γέρμας, -αι, -ενε, -ανία, -αή, -αρός 109, 113
Γέρμη, Γέρμα(ι) 109, 113
Δαρδάπαρά, Dardapara 151
Dardisa 151
diza, dizos 150, 152, 153, 176
Διαζενς 113
dinipula 112, 127, 128
Δοζας, -ας, Dorses, Durze 180
Δορξενθης, -ωνθης 180
Δραδία, -ανοί 152
Δρενς 113
Δρουσίπαρά, Drusipara 151
Δωδοπαρό(ς) 151
Έβρος, Hebrus 177, 259, 341, 347, 351
Έξβενς, Esbenus, Hezbenus 113
Έργινος, -ας, Erginos 351
ζαλμός 112
Ζάπαρά 151
ζελάς, ζειλά 112
-ζενης, -ζενς, -ζενος 113
ζετραία (Dac. ?) 112
ζήλας 112
ζίλαι 112
Zurta 176
Θεῶαες, Θεήαες 128, 186
Ίατρος, Iatrus, Ίατρων 118
Ieterus, Ietro 118
Inipara 151
Iuras 176
Ίουλίπερα 151
Ίστρος 329, 353
Καλοβρή 152
Κέβρος, Κίαβρος, Κέδρος 176
Κειρ(ι)παρά 151
Κέλλη, Κέλλα(ι) 113
Κηριπαρων 151
Κιντος, Cintis (Dac. ?) 162
Κιστίδιζος 152
Κόμνατος 176
Kontadesdos 176
Κρασалоπαρά 151
Κωβρία, Κώμβρεια, Combrea 152
Λισ(σ)ος, Lis(s)os 176
Longinopara 151
Μασκιοβρι ? 152
Μεσημβρία 152
Μητακος 118
Μονκαβουρ 113
Μονκαζενς, Mucasenus (Dac. ?) 113
Μονκακενθος 113
Mucapor, -α (Dac. ?) 113
Μοντζίπαρά 151
Νέστος, Nestos 177, 351
Νόης, Noas, Novas (Dac. ?) 347
Οϊσκος, Oescus 176, 346, 351
Orosines (Phr. ?) 176
Orudisza 113, 152
Όσκιος (Σκίος) 176, 351
Ostudizo 152
Uitus, Uto, Ούτως 111, 114, 118, 127, 128
 129, 176, 346
Πάνακα, Panax 176
Panis(s)as, -isos 128, 176, 184, 346, 351
Pan(n)ysis, -isis, -ysus, Πάνυσος, Παννυσος
 128
-para, -παρά 120, 150, 153, 176
Πέρινθος, Πείρινθος 118, 153, 180
Πολνυμβρία 152
Pulpudeva (Dac. ?) 120, 129
Πισκούπερα 151
Ψήσκινθος 155, 179
Ψήσος 113
Σαβάδιος, Σαβάζιος, Sabazius 110
Σαβος 180
Σαβύλινθος, Sabylinthos 156, 180
Σαλαμβρία(ς), Salambria 152
Σαλδηνος 109
Saldaecaputenus, Salte- 109
Σαλδοκελη(νος), Saldocela 109, 113
Σαλδοουσνηρος, -βυσ(σ)ηρος, -βοουσνηρος 109,
 113, 114
Σαλύνθιος (Thr. ?) 156, 180
Sauzupara 151
Σάλτις 113
Σέρμη, Sermius 113, 177
Σεύθης, Σευθας, Seutha(s) 118, 128

Σηλυ(μ)βρία, -τη, Σα- 152
Σκαιολ, Σκαιβόαι 113
σκάλημ 112
Σκαπιπούλη 114
Σκαπιτοπαρά, Scaptopara 151
Σκαπιτοπαρηνοί 114
Σκαριπαρά, Scaripara 151
Σκασκοπαρά 151
Σκελαβρία, Scelabria 152
Σομβρία, Sombria 152
Σουη(ονί)νος, Σουιτουλ(η)νος 109
Σπάρ(ά)δοκος 114
Σπάρτακος, Spartacus 114, 118
Σπινοπαρά 151
Στρυμών, Strymon 114, 128, 176, 351
Syrmus 177
Συροιστης 111
Ταμονβαρί 151
Tarpudizos 113, 152
Τάρπωρον 151
Tearus 171
Τίβρις 347
Timachus 347, 351
Τόνζος, Tonzus, Tontus 178, 349, 351
Τόπαρον 151
Tranupara 152
Τραῦος (Στραῦος) 118
Τυρόδιζα, Tyrodiza 152
Υμανπάρουβρι 152
Chesdupara 152

TOCHARIAN

A aḥ, aḥām 283, 284
B ek, eḥane 283, 284
A akmaī 283, 284
B akari(t)e 294
A aštare 294
B ɕai- 283
A ɕāk, B ɕak 62, 230
A ɕām, B ɕana 283, 284, 297
A ɕanw- 290
A ɕärme 283, 284
AB ɕärt 283
A ɕiwar, B ɕtwer 283, 284
AB ɕwätsi 292, 297
A kam, B kemc 297
AB käly 290
A kânt, B kante 62, 290
AB kârk- 294
AB kâs- 283
A kâis, B kâiso 283, 284
AB klâ- 283, 284
A klyos-, B klyaus- 290, 292, 293
A ko, ki, B keu 283, 284
B kor 283, 284, 285, 297
A kukâi, B kokale 285, 287
AB kul- 285, 224
A kul(y)i, B kl(y)iye 285
AB kutyp- 285

A kum-, kām-, ɕām-, B kam-, kâ(n)m-, ɕem- 285, 286
A kuñaç 285, 286
A kur-, B kor- 285
A kursär, kurisru 287, 289
B kurp- 294
A kuryar, B karyor 287
B länks, lanise 283, 284
AB länk- 294
A lap- 294
lare 293
Larička 293
A lânt, lântune 293
B läks 294, 296, 359
A lek 283
A lek-, lik-, B laik-, lik- 283, 284
A liv 294
AB lu 294
A lyäm 294
A lykäly, B lykaçkc 283, 284
A malke, B mälkwär 294
B manne 294
B mem- 295
B meske 294
B miço 290
B mik- 295, 296
näk-, nçitär 290
ñuk 58
A nwām 295
B ñake 295
A okät, B ok(t) 62, 290
olyi 295, 296
A orkäm, B orkan(ñe) 284
AB pak-, päk-, pkām, puk-, B päkw- 284
A päklyoş, B päklyauş 292, 293
AB päl-, fäl- 295
A päñ, B piç 284
A pänt, B pinkie, pinkce, pikce 284
A pänw-, B pann-, pänn- 292, 295
AB pärs-, pras- 295
B pärtwe 297
B pelaikne 293
B pelaikneşse 293
A pik-, pek- 297
A pratim, B pratim 295
A pratsak, B pratsäk 295
B praçciye 295
B pruk- 295
A prutk- 295
A rake, B reki 283, 295, 296
A räp-, räp-, B rap-, räp- 295
A rsu- (räs-), B räss- 295
AB ruk- 295, 296
A säpn 293
A sark 297
A säk- 284
A sek-, sik- 284
A ske- (skây-), B skay-, skây-, ɕkai- 293
B soñçke, sauçke 293

A suk-, sūk-, B skw-, sak- 289
A svarp, sparp 295
A šāpn- 293
B šer 293, 295
A špāņ, B špane, špāne 293
A tā-, tās-, tas-, B tes-, tās- 293
B takāwa, takāsta, tūka (takāne) 292
A tarp 296
B tin- 296
A tsāk-, B tsäk-, tsak- 284
A tsar, B sar 290
AB tsok-, tsuk-, B tsauk- 295
A tukri 296
B twere 297

A waçem, B weçeñña 284, 293
A wak, B wek 284
A walke 296
B walkwe 289
A wāktasurñe 284
A wäs, B yasā, ysā 297
A wrātīk- 296
A wrauña 296
A wsok, B wäs(a)mo 296

A yats- 296
A yāl 297
A yuk, B yakwe 290

TOPONYMS AND

HYDRONYMS OF ASIA MINOR

Aῖσηπος 219

Γράνικος, Γρήνικος, Γρήνιος 219

Ἐρμος 219

Indus 220

Κάϊκος 218

Κάλβιος, Κάλμιος, Καλαινός 219

Κάραλις 218

Κάροσ(σ)ος 218

Κάνστρος 218

Κέστρος 220

Κολόη 218

Λυδός, -οί 207

Λουσλία, Λουσινή 218

Lysis 218

Μαλανδρος 218, 220

Μαλόνες, -ία, Μήονες, -ίη 207

Ξάνθος 219

Ῥίνδακος 219

Σαγγάριος 219, 220

Σαγγία 219

Σαπνίσις, Σαφνίσις 218

Σίβρος 206, 219

Σίνδα 220

Σκάμανδρος, Κάμανδρος 219

Tarmila 207

Τέρμερα, -ος, -η 207

Τερμέριον, Τέρμερον 207

Τερμίλαι, Τρεμίλαι 207

Τρεμίλια, Τρεμίλη, Τρεμιλεῖς 207

Τρωές, Τρόλη, Τρωία 245, 246, 247

Truysa, Truysiya 245, 246

VENETIC

See p. 305—306

Index of Scholars Mentioned in the Text

- Abaev V. I. 31, 36, 38, 117, 265, 316,
 320, 328, 330, 361
 Adrados F. R. 31, 71, 104
 Alessio G. 261, 262, 308
 Alfoeldy G. 247
 Alsena J. 77
 Ambrosini R. 310
 André J. 59
 Andreev N. D. 25
 Arcixovskij A. V. 324
 Arntz H. 29, 37, 272, 274, 278, 321
 Arumaa P. 262
 Ascoli G. 41
 Austin W. M. 30
- Bach A. 269, 325, 332
 Balkan K. 257
 Banerji A. Ch. 318
 Barić H. 112, 134, 138, 140, 174
 Baroja J. C. 228
 Bartoli M. 29, 35, 39, 42, 50
 Bartoněk A. 73, 75
 Battisti C. 220
 Bechert J. 224
 Bechtel F. 177
 Beeler M. S. 33, 299, 306
 Belardi W. 313
 Beloch J. 249
 Bennett E. L. 63
 Benveniste E. 21, 25, 32, 33, 60, 281,
 293, 316
 Berard J. 107
 Bernštejn S. B. 263, 266, 268, 271
 Bertoldi V. 259, 261
 Bertoni G. 29
 Bezzenberger A. 41
 Bilabel F. 245
 Birnbaum H. 36, 278, 298
 Birwé R. 316
 Bittel K. 196, 197, 255
 Blegen C. W. 77
 Blumenthal A. von 104, 216
 Boardman J. 63
 Boisacq E. 78, 337
 Bokarev E. A. 227, 262
 Bolelli P. 178, 265
 Bonfante G. 29, 39, 201, 246, 308
 Bopp F. 27, 35, 232, 269
 Bosch-Gimpera P. 228, 243, 247
 Bossert H. 196, 201, 214
 Bouda K. 225, 226, 227
 Bradtke P. von 270
- Brandenstein W. 60, 71, 104, 105, 112,
 175, 210, 215, 231, 320
 Bräuer H. 47
 Brice W. C. 89, 91
 Brjusov A. J. 324, 355, 358
 Brock N. Van 200, 211
 Brøndal V. 39
 Brückner A. 263
 Brugmann K. 28, 29, 35, 36, 41, 48, 59,
 181, 278, 364
 Buck C. D. 33, 37, 41, 70, 71, 73, 84,
 87, 340
 Budimir M. 104
 Būga K. 262
 Bugge S. 33, 203, 204, 229, 230
 Buonamici G. 229, 231, 243, 245
 Burrow T. 39, 49, 48, 56, 276, 277, 312,
 313, 315, 317, 318, 322, 327, 355
 Buysens E. 20
- Čaběj E. 42, 138, 343
 Campanile E. 178, 300
 Capidan Th. 141
 Carnoy A. 104, 105, 204
 Carruba O. 195, 208, 210, 306
 Caskey L. 89
 Čeboksarov N. N. 325
 Černyx P. J. 329
 Chadwick J. 33, 63, 64, 68, 69, 70, 71,
 73, 77, 78, 80, 89, 90, 165, 181
 Chantraine P. 37, 69, 71, 73
 Chapouthier F. 89
 Charpentier J. 281
 Childe V. G. 39, 354
 Čihaf V. 104
 Cikobava A. S. 22, 196
 Cimochoowski W. 141
 Cohen M. 196, 204, 221, 223
 Collitz G. 28
 Corssen W. 229
 Cortsen S. P. 230
 Couvreur W. 33, 287, 293
 Cox C. W. M., and A. Cameron 145
 Crossland R. 30, 31
 Cuny A. 30
 Curtius G. 28, 269
 Czekanowski J. 324
- Daniel J. F. 215
 Davis S. 95
 Debrunner A. 56, 60, 71, 342
 Deecke W. 229

- Deeters G. 225, 227, 254, 255, 316, 338
 Delaporte J. 30
 Deroy L. 89, 210
 Desnickaja A. V. 35, 37, 42, 60, 104, 204
 Detschew=Dečev D. 112, 117, 118, 121, 133, 139, 140, 150, 174
 Devoto G. 35, 39, 178, 229, 231, 299, 301, 308
 Dickenmann E. 262
 Dikaios P. 215
 Djakonov I. M. 254, 255, 256
 Doria M. 165
 Ducati P. 242, 244
 Dunaevskaja I. M. 204, 254
 Duridanov I. 350
 Dussaud R. 107
 Džaukian G. B. 257

 Edel'man D. I. 277, 312
 Ehelolf J. 30
 Eilers W. 197
 El'nickij L. A. 64
 Endzelin I. 307
 Ernout A. 229
 Evangelisti E. 291
 Evans A. 89, 91

 Fabretti A. 229
 Falkenhahn V. 261, 268
 Falkner M. 244
 Faure P. 91
 Feist S. 60, 269
 Fick A. 27, 46, 47, 98, 164, 165, 177, 189, 269, 298
 Fiesel E. 229
 Filip J. 39, 354
 Formozov A. A. 325
 Forrer E. 30, 32, 209
 Fortunatov F. F. 28
 Förstemann A. 309
 Fourquet J. 21
 Fraenkel E. 188, 262, 272, 274
 Fréret N. 275
 Friedrich J. 30, 129, 143, 190, 195, 200, 201, 204, 210, 215
 Frisk H. 37, 78, 311
 Fuhrmann H. 247
 Furumark A. 90

 Gallavotti C. 63, 71
 Gamkrelidze T. V. 196
 Garašanin M. V. 143
 Gelb J. 32, 104, 201, 255
 Georgiev E. 60, 272, 274, 278
 Georgiev G. 185, 354, 355
 Georgiev V. I. 24, 25, 31, 32, 37, 38, 42, 45, 60, 64, 67, 69, 70, 72, 73, 77, 89, 90, 93, 99, 112, 114, 121, 124, 133, 140, 190, 197, 200, 204, 210, 231, 241, 242, 328, 342
 Ghirschman R. 315, 318
 Gillieron 20

 Gimbutas M. 38
 Gindin L. A. 104
 Glaesser E. 321
 Godart L. 63, 89
 Goetze A. 30, 106, 144, 196, 202, 204, 291, 321
 Goold G. P. 90
 Gordon C. H. 95
 Gornung B. V. 31, 36, 38, 39, 60, 61, 104, 262, 316, 318, 320, 355, 359
 Graur A. 22
 Grbić M. 170
 Grégoire H. 379
 Grimm J. 27, 269
 Grinbaum N. S. 72
 Grošelj M. 339
 Grumach E. 89
 Guarducci F. 220
 Guchman M. M. 31, 36, 38, 60, 316, 320
 Güntert H. 60
 Gurney O. R. 196, 213, 255
 Gusmani R. 129, 171, 185, 195, 204, 207, 208

 Haas O. 96, 104, 105, 125, 129, 144, 171, 307, 309
 Hajdu P. 315
 Hahn A. 30, 204
 Halbherr E. 220
 Hall R. A. 22, 320
 Hammerich L. 30
 Hamp E. 306
 Hansen K. 39
 Harmatta J. 104, 105
 Hassenkamp R. 269
 Hauschild R. 104, 329
 Havet L. 46, 47
 Heinz A. 21
 Hencken H. 39, 355
 Hendriksen H. 8
 Herbig G. 229, 230
 Hermann E. 41, 42, 60, 144
 Hestermann F. 104
 Heubeck A. 104, 106, 208, 210, 214
 Heurgon J. 229, 247, 248
 Hirt H. 29, 35, 37, 38, 42, 48, 49, 133, 140, 174, 269, 272, 329
 Hjelmlev L. 23, 39
 Hoenigswald H. M. 30, 104
 Hoffmann O. 84, 342
 Hoffmann E. 104
 Hofmann J. B. 71, 188
 Holub J. 44
 Hommel F. 222
 Homo L. 249
 Horálek K. 41
 Hrozný B. 30, 32, 201
 Hübschmann H. 26
 Hubschmid J. 226, 227, 258, 261, 342, 343
 Huxley G. L. 91

- Ivanov V. V. 35, 104, 198, 263, 281, 291, 293
- Jakobson R. O. 36
- Jokl N. 41, 42, 112, 129, 133, 138, 140, 143, 144, 172, 174, 175
- Jones D. M. 104
- Jones H. 76
- Jones T. B. 104
- Jones W. 27
- Kakabadze S. S. 225
- Kalima T. 325
- Kalleris J. N. 165
- Kamm R. 95
- Kammenhuber A. 30, 195, 196, 198, 200, 202, 204, 208, 254, 256, 313
- Kapanejan G. 194, 197
- Karo G. 247
- Karst J. 299
- Karstien C. 60, 324
- Katičić R. 104, 175, 306
- Kellogg R. 281
- Kerns G. 30
- Kieckers E. 71
- Killen J. T. 63
- Kiparsky V. 44, 45, 47, 262
- Klimov G. A. 226
- Kluge F. 241
- Knabe G. S. 320
- Knudtson J. 216
- Kopečný F. 44
- Koraljuk V. D. 324
- Kossina G. 390
- Kosven M. O. 320
- Krahe H. 33, 35, 104, 150, 172, 173, 174, 175, 305, 308, 329, 330, 331, 341, 342, 351
- Kraiker W. 321
- Krause W. 33, 281, 291, 292, 294, 296, 297
- Kretschmer P. 33, 36, 71, 77, 98, 99, 105, 117, 133, 144, 164, 174, 181, 190, 206, 217, 225, 231, 299, 306, 308, 320, 338
- Krogmann W. 327
- Kronasser H. 30, 104, 174, 175, 194, 195, 197, 198, 201, 202, 206
- Ktistopoulos C. D. 90
- Kuhn H. 269
- Kühn H. 324
- Kujper F. 30, 36
- Kuryłowicz J. 30, 32, 35, 36, 47, 54, 55, 262
- Kuznecov P. S. 31, 36, 38, 316, 320
- Lacombe G. 224, 227
- Lafon G. S. 224, 226, 227, 228
- Lane G. S. 37, 38, 282, 283, 292
- Lang M. 50, 60
- Lanzi L. 229
- Laroche E. 30, 90, 179, 195, 198, 199, 203, 204, 206, 211, 217
- Lattes E. 229, 230, 231
- Laumonier A. 212, 213
- Lebel P. 261
- Lehmann W. P. 25, 30, 35
- Lehr-Splawifski T. 262, 268, 272, 280, 326, 333
- Lejeune M. 35, 71, 75, 85, 301, 305, 306, 310
- Leroy M. 20, 24
- Leskien A. 28, 269, 271
- Leumann M. 262
- Levi D. 89
- Liddell H. 76
- Lindemann E. O. 31
- Lochner-Hüttenbach F. 104, 175
- Lord A. B. 79
- Lottner C. 269, 300
- Luria S. 84, 85, 87
- Lytkin V. I. 315
- Maccarone V. 260
- Machek V. 50, 60, 104, 179, 262
- Malkiel Y. 261
- Malmberg B. 21, 23, 25
- Marr N. J. 225
- Martinet A. 23, 30
- Marx K. 22
- Masson E. 216
- Masson O. 204, 210, 215, 216
- Mathesius V. 36
- Mathews V. K. 266
- Matton R. 89
- Matz F. 64, 87
- Maurer I. 30
- Mayer A. 150, 172, 173, 174
- Mayrhofer M. 104, 313, 314, 317
- McAlpin D. W. 257
- McDonald W. A. 69
- McEvedy C. 354, 355, 358
- Meid W. 265, 300
- Meier H. 261
- Meillet A. 34, 35, 46, 47, 60, 71, 132, 196, 204, 221, 262, 263, 265, 266, 267, 272, 281, 311, 337, 364
- Meister R. 144
- Melikišvili G. A. 255
- Mellaart J. 185, 186, 187, 199, 362
- Menghin O. 259
- Meriggi P. 32, 90, 95, 198, 201, 203, 204, 207, 208, 215, 216
- Merlingen W. 36, 39, 87, 96, 104, 105, 355
- Meščaninov I. I. 256
- Meyer E. 249, 354
- Meyer G. 133, 138
- Mikkola J. 42
- Miklosich F. 154
- Mikov V. 185, 346
- Miller D. G. 47, 61
- Milojčić V. 220
- Mitford T. B. 215, 216
- Mladenov S. 25, 47, 175, 331, 345
- Möller H. 30
- Moora Ch. A. 269

- Morgenstierne N. 34, 312
 Much R. 390
 Mühlestein H. 68, 69
 Mukarowsky H.G. 228
 Müllenhoff G. 309

 Nagy P. 95
 Needly Zd. 324
 Nehring A. 321, 354
 Neumann G. 198, 203, 204, 206, 210, 212

 Ogdenova L. 174
 Ölberg H. 139
 Olivier J. P. 63, 89
 Olzscha K. 230, 247
 Osthoff H. 28, 41
 Oštir K. 299
 Otrcmbski J. S. 262, 264, 267
 Otten H. 32, 195, 198, 314

 Page D. L. 79
 Pallottino M. 229, 230, 231, 242, 243
 Palmer L. R. 35, 63, 71, 72, 91, 93, 106, 360
 Papapostolou I. A. 89
 Paret O. 354
 Parlangeli O. 307, 309
 Parry M. 79
 Pärvan V. 141
 Paul H. 28
 Pauli C. 98, 222, 229, 230
 Pedersen H. 30, 33, 41, 80, 144, 203, 204, 281, 312, 340
 Pelleggrini G. B. 305, 306
 Peruzzi E. 90, 95
 Petersen W. 33
 Petruševski D. 85
 Pfiffig A. I. 268
 Phillipide A. 141
 Picard Ch. 247
 Pisani V. 35, 37, 38, 60, 71, 143, 165, 167, 169, 174, 260, 261, 280, 301, 302, 306, 307, 308, 309, 339
 Platon N. 89, 91
 Poghire C. 165
 Pokorny J. 37, 42, 58, 138, 174, 281, 329, 331
 Pollo S. 41
 Polomé E. 30, 31, 262, 306
 Popc M. 90, 91
 Popov A. I. 325
 Popović I. 140, 174
 Porzezinskij V. 320
 Porzig W. 35, 71, 271, 272, 280
 Pott A. 114, 269
 Poucha P. 39
 Prokosh E. 45
 Prosdocimi A. L. 305, 306
 Pugliese Carratelli G. 90
 Pulgram E. 178
 Puhvel J. 30, 36, 203

 Rachel G. 191
 Rainer E. 257
 Rask R. 27
 Reche O. 321
 Reichelt H. 285
 Reinach S. 222
 Renou L. 343
 Renfrew C. 354, 355
 Ribezzo F. 47, 174, 229, 291, 308
 Risch E. 71, 72, 301, 302
 Rohlf G. 262, 328, 331
 Rosenkranz B. 60, 80, 87, 104, 195
 Rosetti A. 142
 Rozwadowski J. 329, 330, 331, 333
 Ruijgh C. J. 71, 73
 Ruipérez M. S. 65, 67, 68, 71, 104
 Russu I. 139, 142, 165, 172, 175
 Rysiewicz Z. 48

 Sacconi A. 63
 Safarcwicz J. 47
 Sakellariou M. 104, 105
 Sapir E. 30
 Saussure F. de 28, 30, 36
 Sauvageot A. 354
 Scaliger G. 27
 Schachermeyr F. 179, 180, 184, 185, 244
 Scherer A. 38, 104, 354
 Schindler J. 36, 287
 Schleicher A. 27, 28, 29, 35, 269
 Schmid W. P. 352
 Schmidt J. 28, 49, 269, 298
 Schmidt K. 11, 224, 300
 Schmoekel H. 144, 314
 Schmoll U. 104, 300, 309
 Schneider K. 33
 Schrader O. 327, 354
 Schrijnen J. 28, 29, 42, 60
 Schuchardt C. 20, 258, 321
 Schulten V. H. 228
 Schulz W. 321
 Schulze W. 33, 292, 293
 Schwarz E. 30, 332, 333
 Schwentner E. 33, 281
 Schwyzler E. 60, 67, 69, 70, 71, 84, 181, 188
 Scott R. 76
 Seger H. 321
 Senn A. 269
 Serebrennikov E. A. 269, 325
 Sevoroskin V. V. 210
 Shafer R. 215
 Šiadbei I. 140
 Sieg F. 33, 292, 293
 Siegling W. 33, 292, 293
 Simonc C. de 307, 308
 Simpson R. H. 77
 Singha N. K. 318
 Sittig E. 64, 215
 Skok P. 140
 Sköld H. 34, 312
 Sławski F. 44, 268
 Sloty E. 229

- Šmilauer V. 377
 Snyder W. H. 332
 Solmsen F. 188
 Solta G. 41, 42
 Sommer F. 30, 208, 254, 281
 Sommerfelt A. 320, 324
 Specht F. 35, 42, 47, 320
 Sprockhoff E. 321
 Spyropoulos Th. G. 61
 Stang Ch. 262, 278
 Steinthal 20
 Steinhäuser W. 328
 Strunk K. 37, 80, 87
 Struve V. V. 318
 Sturtevant E. H. 30, 204
 Sundwall J. 104, 213, 215
 Szemerényi O. 28, 37, 47, 50, 263, 286
 Tarakanov S. A. 325
 Tegner V. 28
 Ten Kate H. 27, 204
 Terent'ev L. N. 325
 Thieme P. 321, 337
 Thomas W. 33, 292
 Thomsen V. 28
 Thumb A. 42, 48, 71, 104, 329
 Tischler J. 194
 Tomaschek W. 125, 126, 141, 142, 359
 Tonev M. 104
 Toporov V. N. 262, 269
 Torp A. 33, 203, 229, 230
 Tovar A. 71, 77, 104, 228
 Trautmann R. 305
 Tretjakov P. N. 39, 355, 358
 Treu M. 210
 Tritzsch J. 204
 Trombetti A. 225, 229, 230, 231
 Tronskij M. 306
 Trubačev O. N. 179
 Trubetzkoy N. S. 36
 Ulhenbeck C. 225, 228, 258
 Ungnad A. 196
 Untermann J. 63, 104, 258, 306, 308
 Vaillant A. 46, 262, 263, 267
 Van Brock N. 238, 239, 271
 Van Windekens A. J. 33, 104, 105, 283,
 287, 292, 293, 294, 296
 Vasmer M. 42, 44, 47, 138, 174, 326,
 328, 329, 330
 Vendryes J. 281
 Ventris M. 33, 63, 64, 68, 69, 70, 71,
 73, 77, 78, 80, 89, 90, 215
 Vercoutter J. 189
 Verner K. 28
 Vetter E. 229, 231, 249
 Vilborg E. 72, 73, 75
 Vogt H. 226
 Vorob'ev Desjatovskij V. S. 257, 318
 Wackernagel J. 56, 59
 Wagner A. 228
 Wagner M. 300
 Wainwright C. A. 245
 Walde A. 37, 188, 231
 Watkins C. 36
 Weber W. 247
 Webster T. B. L. 77
 Weigand G. 133, 140, 330
 Werner R. 198, 202
 Whatmough J. 301, 302
 Winkler H. 225
 Winter W. 31
 Wolff K. 259
 Xanthudidis S. 91
 Xhuvani A. 343
 Young R. 129
 Yoyotte Y. 210
 Zanotti D. G. 318
 Zeuss C. 270
 Zgusta L. 30, 31, 208, 215

Увод в историята на индоевропейските езици

Акад. В. И. Георгиев

Редактор *Н. Чакалова* Художник *Хр. Симеонов*
 Худ. редактор *Д. Донков* Техн. редактор *Д. Каланова* Коректор *Юлиана Петкова*

Изд. индекс 6839
 Дадена на набор на 3. III. 1980 г. Подп. за печат на 10 V. 1981 г.
 Формат 70×100/16 Тираж 1800 Печ. коли 26,75 Изд. коли 34,66 УИК 39,85
 Цена 6,12 лв.

Код 28 9535172611
 5014-18-81

Печатница на Издателството на БАН, 1113 София, ул. „Акад. Г. Бончев“
 Поръчка 225